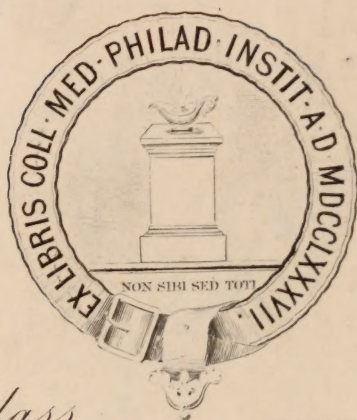




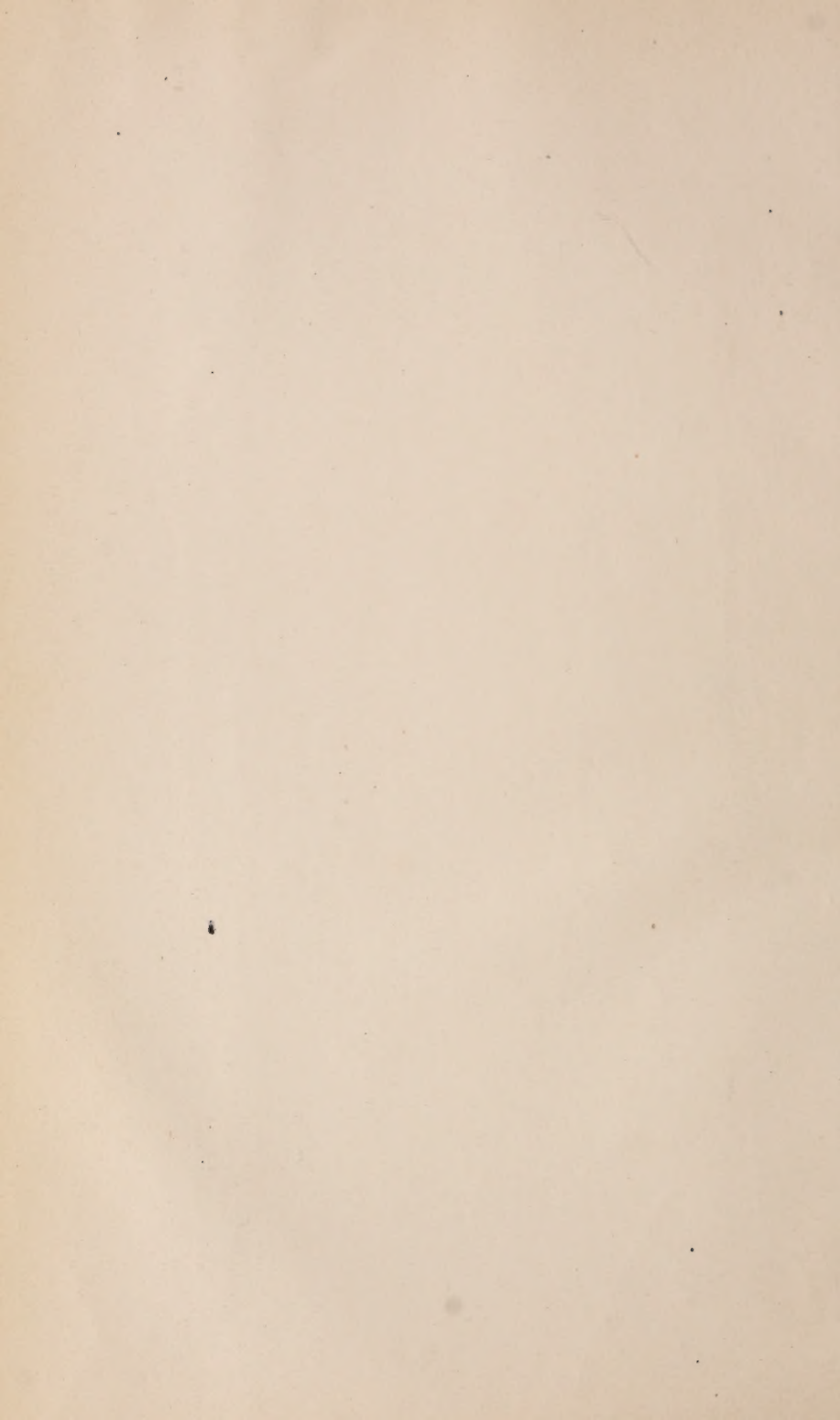
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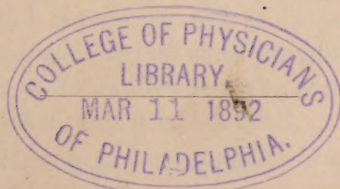
LANDON B. EDWARDS, M. D.,

EDITOR AND PROPRIETOR.

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LANDON H. EDWARDS, M.D.

EDITOR

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Original Communications.

ART. I.—The Status Epilepticus; or, “Etat de Mal Epileptique.”*

By ROBERT T. EDES, M. D., of Washington, D. C.

I propose to bring before the Society, apropos of a case of the kind recently seen, a few remarks upon this condition. Neither the remarks, nor the observations, with one important exception, are new; but, as the affection is not a very common one, I may be pardoned for calling your attention to it for a few moments.

The name, “status epilepticus,” is, or was, applied to a continuous succession of epileptic fits, coming so rapidly that one does not end before another begins; that is, if we count as a fit not only the period marked by active convulsive movements, but the stage of unconsciousness succeeding it.

This is the usual condition, but it is probable that the same, or a similar, pathological state prevails, and may very properly bear the same name where the convulsions are not all very well marked, but are indicated, or at least some of

* Read before Medical Society of the District of Columbia, February 11, 1891.

them are so, simply by muscular twitchings not developing into general convulsions.

Rise of temperature, pulse and respiration are characteristic symptoms; and some others noted in my case, as the extremely dirty tongue, and the rapid supervention of sloughing of the nates, have been commented on before.

In the more typical cases, the status epilepticus is divided into two stages—one marked by the severity of the convulsions, and a second comatose, delirious, or collapsing, which has been termed, though improperly, the meningitic stage.

These are quite distinctly seen in the case I am about to report, especially upon the chart, where the elevation of temperature, corresponding to rapidly repeated convulsions, falls while temporary improvement is going on, and rises again during the final hours preceding death.

On November 10, I was called to see a young man in epileptiform convulsions. He was about 35 years of age, of fair physique. The convulsions were recurring at intervals varying usually from twenty minutes to an hour, and had been doing so for about two days. The night before I saw him there had been one interval of two hours between the fits. I learned that he had his first convulsion during the previous December, another during the winter, a third in April, and then with somewhat increasing frequency lately, although there had been, somewhere during this period, an interval of five months. On some occasions there had been two fits within an hour, but at no time any continuous series like the present. On some occasions the fits had been succeeded by delirium. Early on the morning of the 11th, it was estimated that there had been at least thirty in the present series, probably more. The convulsions were of considerable severity. The first symptom was a dilatation of the pupils equal, or nearly so, on the two sides; then, for a few seconds, the face and head were twisted to the right, and the facial muscles were a little more distorted on that side than on the other. Then the convulsion became general, with no perceptible difference in the two sides of the body. They lasted only a few moments, and gradually subsided.

The interval between them was marked by absolute unconsciousness, with the peculiarities of pulse, respiration and temperature to be afterwards described. An intermis-

sion of nearly four hours was produced by etherization, and after that, for a time, the convulsions were somewhat postponed, either by repeating the same process or by chloral given by the rectum.

The last convulsion was at 2 A. M. on the 11th.

Previous to this, there was no sign of consciousness in the intervals, and the urine and fæces had been passed in bed. His tongue and mouth were extremely dirty.

The bowels had been moved several times.

At 12 M., there were some signs of consciousness, and by evening he would put out his tongue when told to do so.

The next morning he answered questions slowly with "yes" or "no."

On the 13th, he talked somewhat, but incoherently. He began to take at this time a solution of bromide of potassium with digitalis.

From the 13th to the 16th, there was a slow, but gradual improvement, the mind appearing clearer, and the temperature being not greatly above normal. The pulse remained high. A black slough appeared on the left nates, and a dark bleb on the right hand.

On the afternoon of the 16th, there was a sudden attack, in which consciousness was much diminished, but not entirely lost. The symptoms were those of collapse. The pulse became exceedingly frequent, and at times almost imperceptible. Respirations, about 50 per minute. He had taken food only a few minutes previously, and it seems quite clear that the collapse was *not* preceded or accompanied by any convulsion.

He continued in this condition, with some slight fluctuations, until his death, on the 18th.

Stimulants were given hypodermically and by the mouth when he was able to swallow.

To my great regret, no autopsy was permitted.

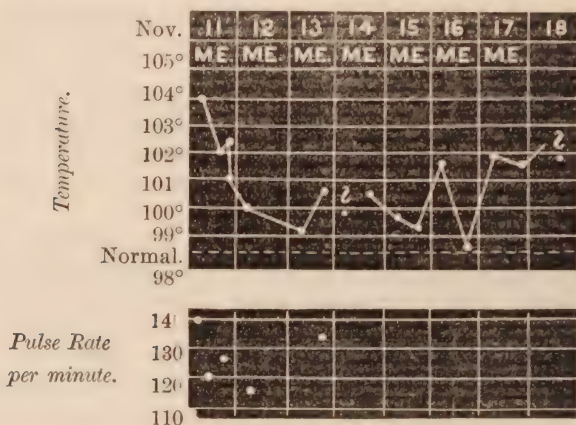
I was unable, of course, to obtain any data as to the history of the case from the patient beyond the denial of any headache during or previous to his illness.

He was not excessively addicted to liquor, although his family thought his fits sometimes dependent on an occasional excess. He was not supposed by a former physician, who knew him and his family well, to have had syphilis. His companions had noted, for perhaps a year, a decided change of disposition, he having become more moody and silent, having nothing to say, or, at times, making offensive remarks.

During the whole course of the case, after it came under my observation, the pulse and respiration were excessively rapid. The pulse came from 140 down to 116 during the days when he seemed to be recovering, and shot up so as to be almost uncountable during the period of collapse that preceded death.

The sounds of the heart did not exhibit variations in intensity corresponding to the changes in the strength of the pulse.

The breathing was shallow and very rapid all the time. On the only occasion in which the actual count was noted, before the collapse, it was 40. After this it became 60.



The temperature is shown on the chart which accompanies. It will be seen that it ran down quite rapidly after the cessation of the convulsions, and rose again in the last two days.

An observation of much interest, which I have not seen anticipated, is that the percentage, and probably the total daily amount of urea excreted was greatly increased. On the 10th, I found 56 grammes per litre; and on the 12th, 61 grammes per litre; on the 14th, 46.

There was no albumen at any of the examinations. The total amount of urea cannot, of course, be determined with accuracy, since the urine was discharged in bed, but it was certainly not extremely scanty; and if we suppose that only a litre was passed, we should have the singular phenomenon of a man eating practically nothing, nitrogenous or

otherwise, passing half as much again urea (or more) as a man on a full meat diet; and this, too, after the cessation of the convulsions.

This excessive destruction of nitrogenous tissue appears to be in harmony with the high temperature and excessive action of the heart and respiration.

The status epilepticus might, without impropriety, be named "Epileptic Fever."

The post-mortem appearances in cases of this kind are not characteristic. It is, of course, well known that there are, as yet, no lesions which have been observed with constancy in epilepsy, that are not found in other diseases. Several have been classed as such, but further observation has always invalidated the claim.

In the fatal cases of status epilepticus, reported by Lorenz,* careful microscopic observation failed to show anything characteristic in the nervous centres. The phenomena certainly point to an intense irritation of the medulla oblongata or portions of the mid-brain sufficiently near thereto to exercise a potent influence over the centres of heat formation or distribution; and the movements of the heart and respiration.

Anatomical appearances after death do not usually confirm this supposition. In the following case, however, something of the kind was noticed.

This case occurred under my observation several years ago, and I have abridged the following account of it from the records of the "Boston City Hospital:"

A man, æt. 30, had, when aged nine, an injury upon the head, after which he had "fits" for three months. There was no return of them until the day before he entered the hospital. There was a history of distinct "aura" and of curious sensations in both legs and arms, especially the left, with some loss of power on that side.

The fits, which were evidently epileptic, repeated themselves with considerable frequency, but were in groups, so that on one day he had three severe and seven slight convulsions within forty minutes; on others fewer, and on other

* *Inaug. Diss. Kiel., 1890.*

days none at all. They were apparently controlled, to some extent, by bromide of potassium, and very evidently some series were broken up by nitrite of amyl, given as soon as there were indications of their approach. Severe headache accompanied or succeeded many of them, and, after a time, delirium succeeded, and, later, replaced them, and became almost continuous.

He was in the hospital from May 29 to July 18, when he died.

I find only three observations of temperature:—One the day of entrance, 98.4° ; another, five days before death of 101.5° ; and one the day of his death, when it was 106° , and the pulse 110.

The autopsy showed, as the only remarkable appearances in the brain, considerable fullness of the vessels, adhesions over both anterior lobes, unusual vascularity of the pons, and *in the pons*, just between the crura, *a red softened spot*. Nothing abnormal of importance in the other organs.

The mortality in these cases is greater than is, I think, generally supposed. I certainly should not have thought it so high as 45 per cent., at which point it is put by Lorenz,* on the basis of eighty cases collected from various writers. It appears to be considerably larger among men than among women, although the female sex is somewhat more liable to the affection.

In looking over the recommendations of authors for treatment, one finds that they agree chiefly on one point, the uselessness of a large number of drugs.

Nitrite of amyl, however, seems to have been of considerable value. It was tried, but not very successfully, in our case first reported. In the other, it was of decided advantage. Amylene hydrate has also been highly spoken of.

In this case, I was confident that ether had a decided effect in postponing the attacks, and chloral hydrate, in not excessive doses, by the rectum, was even more efficacious. How far chloral, if used early and freely, might have been efficient, not merely in checking the convulsive movements, but in preserving life, is not so easy to say. It certainly seems to me that, either alone or combined with bromide, it gives the best chance of attaining this object.

* Lorenz.—Status Epilepticus. *Inaug. Diss., Kiel, 1890.*

It is not, however, so easy to be certain of this, for the reason that in some cases, and some fatal cases, the severe muscular contractions are not the most prominent features, but the coma and fever, with a few well-marked convulsions, and a more or less constant, but not violent muscular twitching, seem to constitute the disease.

In the comatose stage, or that of collapse, chloral would certainly not seem indicated. I was surprised not to find it even mentioned in either of two monographs* founded on an apparently thorough study of the subject.

A phenomenon, which is sufficiently often seen to have been considered by some writers essential, or even diagnostic, is a moderate and usually evanescent hemiplegia. This has been wrongly attributed to some gross permanent lesion in the brain, which by no means invariably exists.

In the first case reported, nothing of the kind could be observed, although repeatedly and carefully looked for. The only possible indication of any unilateral affection was the turning of the eyes and head to the right for a few seconds at the beginning of a fit.

In the second case, there were differences of sensation and slightly of motion in the two sides, but the only gross lesion noted was in the median line.

* Hertz.—Status Epilepticus. *Inaug. Dissert., Bonn, 1877.*
Lorenz, *op. cit.*

ART. II.—The Chronic Sequences of Cerebral Hæmorrhage.*

By J. LEONARD CORNING, A. M., M. D., of New York, N. Y.,

CONSULTANT IN NERVOUS DISEASES TO ST. FRANCIS HOSPITAL, THE HACKENSACK HOSPITAL, ST. MARY'S HOSPITAL, ETC., ETC.

The most obvious and important consequences of a hæmorrhage into the cerebral substance are, of course, the paralyses. These involve the muscles of one-half of the body—those of the limbs, one-half of the face and tongue, and, to some degree, the muscles of one eye. This is the usual

* Read at the Eighty-Fifth Annual Meeting of the Medical Society of the State of New York, February 3rd, 1891.

condition, the paralysis being unilateral and opposite the seat of the lesion. For example, if the left side be paralyzed, the lesion will be situated in the right side of the brain, and *vice versa*. Striking deviations from the typical form are, however, sometimes met with. Thus, only one limb, or the nerves of the head, or those of one arm, may be involved in the paralysis. Or, the arm on one side, and the leg on the opposite, may be affected; or, in exceptional cases, all the limbs may be paralyzed.

Finally, the paralysis may be on the same side as the lesion. After the supervention of paralysis, there may be a gradual recovery of voluntary muscular power, extending over weeks or months. Even after all deformity in the gait, and movements of the arm have disappeared, the patient is nevertheless aware that the affected muscles are, by no means, as strong as those on the opposite side. Such results as these are to be regarded as favorable. Sometimes, the final outcome is not so fortunate. The affected muscles continue to regain power; the hopes of the patient are greatly stimulated, and everything about the case seems most encouraging; when, sometimes during the first eight weeks, or perhaps a month or two later, the patient notices a certain spasmodic rigidity in the affected muscles. This condition of tonic spasm is nothing more nor less than what is known as contracture, the advent of which must always be regarded as an exceedingly unfavorable symptom, in so far as further recovery from the hemiplegia is concerned. As a rule, the contracture begins with slight stiffness of the flexor muscles of the hand and arm, culminating in a spasm so violent as to cause firm closure of the hand and adduction of the arm. The lower extremity is more rarely involved in the spasm. In the beginning, there is a relaxation of the spasm during sleep and the early morning hours; eventually, however, the contracture becomes persistent even during sleep.

Now, the autopsy has shown that about the time this stiffness—this contracture—occurs in the limbs, what is known as secondary degeneration takes place in the spinal

cord. Hence, the presence of the contracture has been ascribed to the occurrence of this secondary degeneration, the seat of which is, for the most part, in the lateral column on the opposite side to the cerebral lesion.

With regard to a rational explanation of the origin of this degeneration, we have the following facts to help us: In the first place, it is a matter of experience that when a motor nerve is cut off from communication with its corresponding motor cells in the anterior horn of the cord, either by a break in the conduction of the nerve, or by a lesion which destroys the cells, secondary degeneration of the peripheral portion of the nerve takes place. The reason for this interesting phenomenon is usually assumed to be the elimination from the nerve of the "trophic influence," which is supposed to reside in the motor cells of the anterior horn.

Now, just as the motor cells in the anterior horn of the cord exert a "trophic" influence upon the nerve, so the great ganglion cells of the motor portion of the cortex cerebri control the trophic destinies of the medullary fibres (motor) which arise from them. It follows, therefore, that if these cells be diseased, or if there be a break in the motor path leading from them, a degeneration of that portion of the tract lying below the lesion is inevitable. In so far as the final result is concerned, it matters little whether the lesion is located in the cells themselves, the motor fibres of the corona radiata, the internal capsule, the crus, or the pons. Here, then, is an admirable explanation of why secondary degeneration occurs after cerebral lesions, and notably after hæmorrhage and embolism. Unfortunately, however, it does not explain why quite severe hemiplegia may be present, and yet no contracture occur. Certainly it is not reasonable to infer that all, or most of the affected cerebral fibres have been regenerated, thus restoring the connection with the great motor cells in the cortex; the very fact that the paresis still persists proves plainly enough that the damage has been by no means repaired.

At some future time, an adequate answer may be given to

these apparent inconsistencies; for the present, at least, the theory which assumes that the contracture is the result of this degenerative change in the pyramidal tract of the cord may be assumed to be correct.

Let us resume the symptomatology of cerebral hæmorrhage. To begin with the motor derangement about the head—it is worthy of note that, on a superficial inspection, the whole side of the face appears implicated in the paralysis; but a careful examination reveals the fact that the muscles of the upper part of the face still retain their contractibility. The frontalis, the orbicularis palpebrarum, and the corrugator supercilii muscles are, in fact, but exceptionally affected. Under certain circumstances, to which we shall later have occasion to refer, they may, however, be involved. Owing to paralysis of the muscles of the tongue, throat and mouth, articulation may be greatly interfered with. Speech may, likewise, be deranged by the extension of the central lesion to the Island of Reil. These aphasic symptoms have already been accorded a full discussion.

A very characteristic symptom is the deviation of the tongue, when protruded, towards the paralyzed side. This phenomenon is easily accounted for, when we remember that the muscular power in one-half of the organ is practically abolished—thus permitting the healthy muscles to draw the organ from the median line.

In sudden and severe attacks of cerebral hæmorrhage, there is frequently conjugate deviation and rotation of the head towards the central lesion. Both the internal and external recti muscles may be implicated.

Disturbances of sensation are frequently encountered, especially during the beginning of an attack of hemiplegia. Sometimes the derangements of sensibility are slight and evanescent in character, whereas, in severe cases, the loss of sensibility is pronounced in the muscles, skin, and even some of the joints. As a rule, however, anæsthesia is much less persistent than the motor derangements, and may often disappear even during the first week of the paralysis. When the anæsthesia is profound, as in the severer varieties of

cerebral hæmorrhage, recovery may take place slowly. As sensibility is regained, however, the condition of anæsthesia gives place to hyperæsthesia.

Cases have been recorded in which, while the tactile sense and power of localization were preserved, the sensibility to temperature was entirely lost. A case of this kind, occurring in a man who had suffered from cerebral hæmorrhage, and who subsequently developed an inflammatory condition in the joints on both sides of the body, was recently referred to by Dr. F. LeRoy Satterlee, of New York.* The prick of a pin or the slightest touch was readily perceived; but when a tin cup filled with hot water was applied to his finger-tips, he failed to give the slightest evidence of having perceived it.

Fluctuations of temperature, especially during the early stages of the attack, are common. In the beginning, there is always a decided lowering, the depression of temperature sometimes reaching 96.5° F.* In severe cases, the primary depression is speedily followed by a continuous rise, reaching as high as 108° F., immediately before a fatal termination is reached. On the other hand, in the less severe cases, there is a slight rise following the initial depression—the temperature remaining at this elevation for several days. A stationary condition of this kind may be looked upon as favorable, provided there is no secondary elevation, presaging further central complications.

Trophic disturbances of various kinds often supervene upon a severe attack of cerebral hæmorrhage. Sometimes we have to do with acute bed-sores, located in the gluteal region, and attaining a high degree of development during the first few days of paralysis.† Again, later on in the course of the disease, about the time of the development of secondary rigidity, a severe inflammation of the joints on the affected

* "A Case of Bilateral Post-hemiplegic Arthritis." By F. LeRoy Satterlee, M. D. and J. Leonard Corning, M. D.—*New York Medical Journal*, March 16, 1889, page 291. *et seq*

† *Études Cliniques et Thermométriques sur les Maladies du Système Nerveux*. By Bourneville. Paris, 1873.

‡ *Leçons sur les Maladies du Système Nerveux*. By J. M. Charcot, Paris, 18—, page 68 *et seq*.

side, involving particularly those of the fingers, toes, and shoulders, may make its appearance. A remarkable case of this kind was recently referred to me by my distinguished friend, Dr. F. LeRoy Satterlee.*

The patient, a man fifty-two years of age, had suffered from cerebral hæmorrhage two years previous to my seeing him. The entire left side was still paralyzed, but I could glean no certain account of any aphasic symptoms. There was slight anæsthesia during the first three days, which gradually wore off, and had entirely disappeared at the end of the first or beginning of the second week. At the same time there was a partial recovery of power in the affected parts. After the paralysis had lasted between three and four months, the patient noticed the first evidences of contracture in the affected hand. Soon after the advent of the rigidity—from two to three weeks, as nearly as could be judged from the patient's account—it was noticed that the healthy right arm and hand were thrown into a state of mild tremor whenever movements were attempted with the left hand. This was specially observable early in the morning, at which time the contracture being but slightly marked, he was in the habit of devoting some minutes to writing. Matters were progressing in this manner, when, soon after the appearance of the tremor in the healthy limb, the left shoulder began to be stiff and exceedingly painful; the joints of the fingers became swollen and sensitive; there was considerable temperature, and in a short time the joints of the toes on the affected side were also implicated. Hardly had the patient betaken himself to bed, when the tremor in the healthy limbs broke out anew, such simple movements as those involved in adjusting the bed clothes or turning from the back to the healthy side, being sufficient to evoke it. At the same time, the joints of the toes, and particularly those of the fingers of the healthy side, became likewise acutely inflamed. This acute inflammatory condition of the joints has in great measure disappeared; but, although there is no longer either local pain or tenderness, there is great deformity of both hands, as well as profound derangement of the vaso-motor mechanism.

When the patient lies in a horizontal position, the color of his hands is pale, or rather of a slightly bluish tint. As soon, however, as he sits up in bed, and allows his arms to hang down, both hands become livid and engorged, while

* *New York Medical Journal*, March 16, 1889, page 291.

the blood vessels, and particularly the veins, are enormously distended. This condition of engorgement is at once relieved by causing him to resume a horizontal position. There is slight œdema of the extremities at all times. The condition of both the heart and the kidneys has been carefully examined by Dr. Satterlee, with purely negative results.

This unique case is an exceedingly good illustration of post-hemiplegic joint affections; and not the least of its interesting features is the extension of the inflammation to the joints of the healthy limbs.

Among the consequences of cerebral hæmorrhage, none are more suggestive than what have been termed associated movements. The power of moving the affected limbs having returned to a certain extent, the subject attempts to perform simple acts with them, and is astonished to witness the occurrence of similar movements in the healthy members. Various theories have been advanced to explain this interesting phenomenon, none of which are altogether satisfactory. Similar movements to those obtainable in the healthy limbs may sometimes be evoked in the paralyzed members, when the subject sneezes, defecates, coughs, yawns, and micturates, or when he uses the muscles of the healthy side.

It is likewise noteworthy, that after the prevention of the contracture, the tendon-reflex is exaggerated on the affected side.

Sometimes, too, in relatively rare instances, the affected muscles atrophy during the early stages of the paralysis. Such atrophy, when it occurs, is ascribed, and I have no doubt of the correctness of the assumption, to the extension of the secondary degenerative process in the pyramidal tract to the trophic cells of the anterior horns of the cord.

Again, it is interesting to note in some cases a more luxuriant growth of hair on the affected than on the healthy side. *Per contra*, when the paralysis occurs during early childhood, one or both of the affected limbs may suffer arrest of growth, so that in after life a high degree of deformity may be engendered, owing to disparity in size between the healthy and paralyzed limbs.

Finally, we must not forget to note those mental disturbances, which are often one of the characteristic features of a case of severe hemiplegia. These derangements usually assume the form of dementia, to which may be added excessive emotionalism. The subject becomes lachrymose, or exalted upon the most inadequate provocation; or, in the more advanced stages of the disease, he may be entirely bereft of memory, as well as torpid and utterly without power to do for himself. Such are the typical mental troubles evoked by gross lesions of the brain, by embolism, softening or hæmorrhage, for the two former conditions may produce it as well as the latter. Sometimes, however, and this is specially true of neurotic individuals, a high degree of restlessness may be developed. The subject becomes depressed, noisy, sleepless, and perhaps somewhat violent and filthy in his habits; so that his committal to an insane asylum becomes imperative. Cases of this kind are, nevertheless, exceptional; for it is usually quite within the domain of prudence to keep the patient at home, where his wants may be attended to without the aid of expert attendance.

It has frequently been asked, how do these deep-seated hæmorrhages produce symptoms which are so manifestly cortical in their origin? Various replies have been made to this question; the most common is the assertion, that the mental symptoms are due to reflex irritation, emanating from the lesion.

This may, or may not be the case; on the other hand, however, we know that a hæmorrhage of any considerable magnitude, must inevitably produce havoc among the delicate fibres with consequent inco-ordination and morbid inhibition. It may readily be imagined, therefore, that any slight irritation, irrespective of its origin, must, under such circumstances, be sufficient to evoke chaotic mental phenomena or convulsions, or both.

Clouston states that in the nine years, from 1874 till 1882, there were 3,145 admissions to the Royal Asylum at Edinburgh. Of these, 91 cases were diagnosed as paralytic insanity, of which 17 or almost 19 per cent. recovered men-

tally. This is certainly a remarkable percentage of recoveries—so striking, in fact, that Clouston is led to comment on it: “Had I been asked before,” he observes, “I should have said that it was quite a rare thing for a case of paralytic insanity to recover. But this shows that when a gross lesion of the brain first occurs, it often sets up a convolitional storm of mania or melancholia, which is temporary and curable. The immediate mental effect is of the nature of a reflex irritation, or temporary vascular congestion, which subsides like any other maniacal or melancholic attack.”*

53 West 38th Street.

* *Clinical Lectures on Mental Diseases.* By T. S. Clouston, M. D., Philadelphia, 1884, p. 285.

ART. III.—*Apioline in Amenorrhœa and Dysmenorrhœa.**

By RICHARD S. HILL, M. D., of Washington, D. C.

While the title of my paper is “*Apioline in Amenorrhœa and Dysmenorrhœa*,” I shall refer principally to the latter.

The subjects of amenorrhœa and dysmenorrhœa are of much interest, both to the general physician and the gynecologist. I am very well aware that much has been written upon them, especially upon dysmenorrhœa, but am fully convinced that these troubles have not been given that amount of *practical medical* attention by the several text books which they deserve. Hence, I wish to call your attention to those drugs used and highly recommended by others, and especially to the use of one drug which has given, in my hands, great satisfaction, and to cite several cases treated successfully with it.

If I am able, through my remarks to-night, to lead my fellow member to make such inquiry and give such thought to these diseases or troubles, and thereby relieve the sufferings of one poor woman, I shall be well repaid.

* Read before the Medical and Surgical Society of the District of Columbia, February 16th, 1891.

We all know what great anxiety is caused in many families; what great worry is caused many a mother by her daughter not being "sick" regularly, or for months at a time; besides this anxiety and worry, the suppression of the menses is most assuredly, to a greater or less extent, unhealthy. The monthly suffering in many cases of dysmenorrhœa, is almost equal to the pains during the worst cases of labor, and far more prejudicial to good health, keeping the poor sufferer in a constant state of dread and fear.

Dr. E. W. Mitchell, in the discussion of his paper on "The Medical Treatment of Dysmenorrhœa," October 10th, 1889 (*Am. Journal Obst.*, Vol. XXIII, page 329), says: "From his observation, two classes of girls were especially liable to dysmenorrhœa, forming the extremes of society. First, the daughters of wealth, who are sent to school early, have little healthy exercise, but keep up the dissipations of society, late hours, etc. Secondly, the girls of poor families, who are ill-fed, work very hard, and in addition, have often inherited a weak constitution."

During my past connection in the service of "Diseases of Women" in the Central Dispensary in this city, and also in my private practice, my experience is the same as that of Dr. Mitchell. I will go further and say, that the first class above mentioned, do not respond to treatment as readily as those of the second.

In the first class of cases, we are compelled to treat on a supposition to a great extent, and for a long time, since any examination is most positively refused both by the patient and by her mother. As Dr. Geo. F. Shrady says in an editorial in the *Medical Record*, Vol. 35, page 129:

"The general practitioner is often asked to relieve cases of this nature in girls who would never submit to an examination or operation, preferring rather to suffer pain indefinitely, than the shame of a physical investigation into the nature of their trouble. In such cases, the physician is forced to try the effect of medicinal agents, groping, it may be, in the dark, before insisting upon an examination. Such being the case, it is well to learn what remedies have been found to be of occasional service in relieving symptoms of

this nature which are not dependent upon actual organic disease."

I have said in the beginning of this paper, that the text-books have not given these subjects, especially amenorrhœa, full medical attention. The treatment is passed over in a very general way, stress being given to the general health, out-door exercise, sending patient to the country, ocean trip, Turkish baths, hot hip baths, attention to bowels; then a passing mention that the emmenagogue remedies are sometimes useful. With these preliminaries, great attention is then given to the surgical treatment by bougies, dilatation, tampons, pessaries, etc., but it is here that we must remember what Dr. Duncan says on this subject:

"No rules that I can give you will make up for want of good sense and good feeling on your own part, but I shall give you some hints. The first is that you should, as a rule, not resort to the treatment by bougies in an unmarried woman without the consent of three parties—firstly, your own approval; secondly, that of the mother or guardian of the patient; thirdly, that of the patient herself. All of those should be quite aware of the circumstances, and of what is proposed to do." (Hart and Barbour, "*Manual of Gynecology*," page 556.)

Upon menstrual disorders, we are greatly indebted to the following gentlemen for the deep study and practical experience which they give in the following articles: Dr. Wylie, on "Menstruation and its Disorders," (*Am. System of Gynec.*, Vol. I); Dr. Palmer in a paper read before the Eighth Annual Meeting of the American Gynecological Society (*Trans. Am. Gynec. Society*, 1883, page 101); Dr. Segur, in a paper before the Connecticut Medical Society at its annual meeting in 1888, on the "Medical Treatment of Menstrual Disorders"; Dr. E. W. Mitchell, in a paper on "The Medical Treatment of Dysmenorrhœa," read before the Cincinnati Obstetrical Society, October 10, 1889 (*Am. Journal of Obs.*, page 259.) The last two papers, as their titles show, give especial attention to the *medical* treatment.

We will now pass on to the *ordinary emmenagogues*, remembering, of course, that the general health and condi-

tion must be looked after; tonics, out-door exercise, good nourishing food, are all very necessary. The following drugs are among those that have been generally used and recommended for *amenorrhœa*: Iron, arsenic, cod-liver oil, permanganate of potash, salts of manganese, santonin and apiol. In *dysmenorrhœa*, *actea racemosa*, *pulsatilla*, *gelsemium*, *cannabis indica*, *cimicifuga*, bromides, chloral, camphor, *viburnum*, antipyrin, *hyoscyamus*, *belladonna*, oxalate of cerium, permanganate of potash, salts of manganese, electricity, faradic and galvanic currents, bi-chloride of mercury. Capsules of apiol and apioline in both *amenorrhœa* and *dysmenorrhœa*.

Apiolinum or apioline is the true active principle of *apium petroselinum*, or common parsley; and according to an acticle in the *Satellite of the Annual of the Universal Medical Sciences*, April, 1890, page 163, is prepared by M. Chaptout, of Paris, as follows:

"After complete exhaustion with light petroleum ether, the resulting liquid leaves on distillation, a semi-congealed residue of neutral substances, fatty acids, etc., which, when treated with alcohol, is partially soluble. The alcoholic solution on evaporation leaves a product which, in addition of caustic soda, yields a thick, reddish, liquid, boiling at 275° C., specific gravity, 1.113, which may be looked on as a pseudo-apiic alcohol."

Physiological experiments made in the laboratories of the Faculty of Medicine of Paris, show that apioline has a special action on the circulatory system of the smooth, muscular fibres of the uterus, producing vascular congestion and excitement with contraction.

I have been able to find but very little in the text-books upon this subject. They all mention apiol as having been used with more or less success. Some writers go so far as to claim it superior to any other emmenagogue. Now if apiol is recognized as good, and if apioline is, as claimed, a superior preparation, and the active principle of *apium petroselinum*, it should then be superior to apiol, and rank among the best, if not the very best emmenagogue. My experience

has been far more satisfactory with apioline than any other drug.

Mundé and Wells, in their very valuable articles and researches in Dr. Sajous' *Annals* for 1889 and 1890, on "Diseases of the Uterus, etc., and Disorders of Menstruation," Vol. XI, do not mention, and report no articles mentioning apioline.

In Wood's *Materia Medica and Therapeutics*, sixth edition, 1886, page 587, under head of apiol, no mention is made of apioline.

In Bartholow's *Materia Medica and Therapeutics*, seventh edition, 1889, page 736, under head of apiol, no mention is made of apioline.

In Potter's *Therapeutics*, second edition, 1890, page 106, no mention of apioline under head of apiol is made.

In Hare's *Therapeutics*, 1890, page 64, there is no mention of apioline.

In Shoemaker's *Materia Medica and Therapeutics*, 1889, Vol. XI, page 447, we read: "It is said to be not abortifacient. In cases of scanty or deficient menstruation, with pains, etc., one capsule can be given after meals, thrice daily, for a week before the expected period, as recommended by Dr. Fordyce Barker.

Ry.—Apolini, grm. iv., ft. capsules. No. xx (Chapoteaut).
Sig.—Take three each day during week preceding menstruation. It is especially appropriate when amenorrhœa depends upon anæmia."

REPORT OF CASES. CASE No. I.—Missouri W., a mulatto, washerwoman, age 32 years. Robust constitution, always healthy, except severe dysmenorrhœa, which she has had since birth of her only child six years ago; which after three days labor was delivered dead with forceps. Since then, always obliged to remain in bed first two days of menstruation, which usually lasted four days. Since she came under my care, about two years ago, she has been treated with hot douches, permanganate of potash, and binoxide of manganese, for about three months without relief. I gave her in December, 1889, twelve capsules of apioline, of three minims each, and ordered her to take one three times a day before meals, beginning three days before, and

continuing to second day of period. The capsules acted marvelously. Period came on and lasted four days; quantity free, no degree of pain, remained at work entire time. I ordered same prescription for next period, but no flow and no pain. The woman soon proved to be pregnant, and on October 21, 1890, after three hours' labor, I delivered her with forceps, of a $10\frac{1}{2}$ pound male child. The father and mother are still thanking me, and insist that it was my medicine that gave them "a live boy baby."

CASE No. II.—Miss E., white, age 23, small, anæmic, and of nervous temperament. Came to me from the country in May, 1890, for severe dysmenorrhœa. Had taken quantity of different kinds of medicine with no relief, now had to go to bed, take brandy in large quantities, apply mustard plasters, and remain in bed for two days. Period usually lasted one week, and was irregular. I gave her twelve capsules of apioline, three minims each; ordered her to take one three times a day before meals, beginning three days before, and continuing until second day of period. Reported great relief after first trial. I told her to go home and take the capsules as I ordered again at next period, and to report to me. She is now entirely well. She took the apioline for three months in succession, and not since.

CASE No. III.—Miss B., white, aged 23 years, strong and healthy, very fond of society and attending dancing parties. Consulted me June, 1890, for treatment; had suffered almost tortures at her periods for the past four or five years, but would never consult a physician. Period lasted six days; always remained in bed during the first two days; took stimulants and used hot water to abdomen. I ordered twelve capsules of apioline, three minims each. Directed her to take one three times a day before meals, beginning three days before and continuing to second day of period. Relief began at first period, as she experienced but a moderate degree of pain; I renewed the prescription for next period; since then she has been perfectly well; does not suffer an hour from menstruation.

CASE No. IV.—Miss N., white, aged 25 years; actress; tall and very anæmic; hysterical and nervous temperament. In 1885, she had a severe case of inflammatory rheumatism; came under my care first in spring of 1888; was then very anæmic and hysterical; always had severe hysterical convulsions at every menstrual period, lasting off and on for four days. I have had her on iron, arsenic, cod-liver oil, bitter tonics, malt and pepsin, bromides, asafoetida, per-

manganate of potash, binocide of manganese, antipyrin, etc. After a trip to the seashore in the summer of 1889, she improved considerably, and again joined a theatrical company that fall, and remained "on the road" until February, 1890, when she was brought home in a state of complete nervous prostration. I was anxious to give up the case, but the family insisted upon retaining me. I was now at a loss to know what to do. My patient was worse than ever, and had acquired the morphia and whiskey habits. Her stomach rebelled against food, and she was almost crazy. I positively forbade morphia, and had her continually watched; allowed a moderate quantity of whiskey in milk punch, and with raw egg as food. Prescribed maltine with iron, quinine and strychnine, and gave night and morning pills of aloes and asafœtida. She improved slowly.

During the latter part of the spring of 1890, I insisted upon an examination to try and find the cause of the dysmenorrhœa from which she still suffered, but it was most positively refused at the time. Later, however, I did examine her, and found a very small uterus, high up. While under examination, she went off in a hysterical attack, and I had to stop. Two more attempts were made at other times with the same result, as I did not care to use an anæsthetic; continuing my general tonic treatment, using large doses of maltine and iron, I determined last October to try apioline. She took apioline just before and during the period for three months with some relief. I began giving her capsules of apioline three times each day during January. Her menstrual period in January (second week) was the least painful yet. She feels much better, is in good spirits, and says she will soon be well and return to the stage.

She has just reported that she menstruated during the second week of the present month (February, 1891), had slight pains, did not go to bed nor have a nervous attack. I shall continue apioline and stop all other medicine for the present.

CASE NO. V.—Reported by the kindness of Dr. James D. Morgan.—An actress having suffered for years at her catamenia; flow generally scanty and often membranous in character. Several days before her menstrual epoch suffered violent congestive headache, palpitation of the heart and great despondency. The flow generally made its appearance with most excruciating agony, often throwing the patient into convulsions, opisthotonos being sometimes pronounced. Patient had been treated by many distinguished physicians

in many different cities, and, correspondingly, had tried many remedies. I had but recently read of the virtues of apioline, and through the aid of a neighboring pharmacist, I secured the drug. The good results were manifest a few hours after the capsules were given, and the patient continued to use them with marked relief at her menstrual periods. Some two months ago, I was called to see this same young actress, and found her almost convulsed in dysmenorrhœa. She told me that in the hurry of travelling she had lost her medicine, and that she had found nothing to relieve her so much as the medicine I had ordered. I gave her a prescription for the capsules of apioline, and presume that the drug is having the same salutary effect.

In conclusion, I would say, that apioline is decidedly the most reliable drug that I have yet used in dysmenorrhœa. In all of the few cases I have so treated, relief has invariably resulted, but by no means do I claim it to be a specific.

I regret not being able to report some cases of amenorrhœa treated successfully; I have, however, had no failures, for in the three cases where the apioline has been used in amenorrhœa, pregnancy has followed. I, however, firmly believe it is beneficial in amenorrhœa; for in all my cases of dysmenorrhœa treated with apioline, I noticed an increased flow of the menses, and its physiological action is most active upon the uterus and ovaries, "A stimulant to the uterine system," as Bartholow says of apiol (*Materia Medica*, page 604).

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ART. IV.—Pelvic Inflammations. A Clinical Lecture.

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Gentlemen,—In considering pelvic inflammations, we should first arrive at some common understanding with regard to the meaning of the term *inflammation*. It has come to be used in so general a manner that some distinction should be made.

I understand by the term inflammation, at least an abnormal condition of the blood vessels in the tissue involved; for instance, there is muscular engorgement, and probably a tendency to bleed. If there are glands and follicles present, there will also be hypersecretion. Almost always there is tenderness to the touch, hyper-sensitiveness. That is about what we mean when an inflammation has attacked a mucous membrane; the blood vessels are enlarged or swollen, the secretions are profuse or abnormal, the structures bleed readily when touched, and are hyper-sensitive.

We also recognize an acute and a subacute condition. It may be claimed that there is no such thing as chronic inflammation, but certainly there is an abnormal condition resulting from an acute inflammation, which we call *chronic inflammation*.

In speaking of *pelvic inflammation*, it would be well to make some rational division of the subject:

(1.) There may be an inflammation of the lining membrane, not having extended beyond the uterine tissues.

(2.) Inflammation not only of the uterus, but also of the tubes and ovaries. Almost or quite always when the tubes and ovaries are inflamed, the peritoneum is also involved, giving rise to exudations and adhesions.

(3.) There may be inflammation of the uterine appendages and of the peritoneum surrounding the uterus, while this organ itself shows very little trouble. That is, the uterine inflammatory trouble may have subsided, while the peri-uterine, or tubal disease still persists. Those are divisions which it is necessary to make in order to get a correct idea of the etiology and treatment of uterine inflammatory diseases.

I shall speak of the *pathology* only so far as it may have a bearing on the etiology and treatment of these affections.

As to the *cause of inflammations of the endometrium*, it is necessary to take into account, not only the local, but also the general condition. I am satisfied that, in certain forms of chronic inflammation of the lining membrane of the

uterus, general conditions have almost as much to do as have local conditions in producing the result.

One of the most common causes, unquestionably is *imperfect development*. When I speak of imperfect development, I mean that it may apply not only to the genital organs, but to the entire system. This fact explains to me why there is so much more uterine catarrh, leucorrhœa, dysmenorrhœa, and other indications of inflammation of the mucous membrane lining the uterus among the so-called better class of people. Among the poorer classes, the weak die before the fourth or fifth year; among the wealthier class, hundreds of women are enabled to reach puberty by the assistance they get from their surroundings. If a child is delicate and feeble, it receives greater care, gets medical advice, is given food of the best quality. When puberty is reached, the natural defect which has been only partly overcome, begins to manifest itself in imperfectly developed genital organs. Among savages and the poorer people, who must struggle for an existence, in those who attain to the age of puberty, the generative organs are much more likely to be well developed than in many of the rich, who, in spite of a naturally feeble constitution, are with care brought to the age of puberty. In general, however, the customs of civilization tend to suppress the generative organs. Moral teaching has this tendency. Marriage is later among the better class of people; out-of-door life is scarcely possible among growing girls; if they go out an hour a day it is considered a wonderful thing.

As it is with individuals, so it is in some degree with nations. All things of organic life have their period of development, their full growth, their old age and death. It would seem to be very much the same with nations. It is probable that among the older nations—those belonging to the Latin race—there is more imperfect development of the generative organs than among the newer nations; than among the Anglo-Saxons, for instance, including the English and the Germans. That may seem a pretty broad statement, but I am satisfied there is some truth in it.

We should not overlook any of the facts that may have a bearing on the etiology of uterine troubles.

The generative organs, unlike the hands, the stomach, the heart, the brain, and other organs, have no use until full development. In other words, from birth until puberty, they are passive or quiescent. They are the last organs to develop. Being naturally the last, other organs of the body, especially the brain, get the advantage, show activity and develop at the expense of the least active, the last to develop. The girl has not sufficient strength left after supplying the demands of the brain and other organs for the growth of the genitals. That explains why civilized life has such a detrimental influence on the sexual system of women; that explains why in America, where civilization and brain development are more general and intense than among other nations, there are to be found the most cases of uterine disease.

It has been stated, and I believe with some truth, that among the better class of people in America, there is more disease of the generative organs than among any other people. My explanation is, as I have already suggested, that we live under greater pressure, that the brain is more developed here than among other people. Just at the time when the girl is about to become a woman, the pressure becomes so great that she has no surplus strength left for the development of the generative organs. We often see strong, vigorous-looking women, so far as physical appearances are concerned, who have a small, imperfectly developed uterus; or the cause may be a little more direct. A girl having reached the age of twelve or thirteen years in almost perfect health, may then be taken down with typhoid fever, or scarlet fever, her general condition brought to a very low ebb, just at a time when the generative organs should begin to develop, and the result is a dwarfed state. As an imperfectly developed man would probably be the first among a number equally exposed to contract a disease, so an imperfectly developed uterus is more likely than other organs in the body which are well developed to take

on catarrhal or other trouble. Among women who have suffered from some severe sickness about the age of puberty, it is not uncommon to find leucorrhœa, dysmenorrhœa, and after childbirth, tears of the neck of the womb, sub-involution, etc.

Then an imperfectly developed uterus, which had already become the seat of catarrhal trouble, would be more easily the prey of tuberculosis, and it is among this class of patients that we are most likely to find *tubercular endometritis*, or *tubercular salpingitis*, and *oöphoritis*. I suppose, too, there may be acute infection during the course of infectious diseases.

As showing the curious manner in which a certain form of infection may take place, I might mention the case of a girl seen in Brooklyn, who had a long fold like a prepuce hanging over the clitoris. Without known cause she developed peritonitis, which was mistaken for typhoid fever at first. A large pelvic abscess formed. I was puzzled to know how the girl could have got up a salpingitis or pelvic abscess. I know it was not from gonorrhœa. In searching for a cause, I found that the pocket under the flap covering the prepuce was filled with decomposing secretions, and I became satisfied that septic material had passed from here up to the uterus, and on to the tubes. I do not know though that the girl had a habit of introducing things into the vagina.

Of course, such infectious diseases as gonorrhœa and syphilis may be the starting point of a pelvic inflammation; but as the most important cause—certainly next to imperfect development and catarrhal troubles, I would place *septic poisons*—septic poisons especially after labor, and more especially after abortions. When I say septic poisons, I do not mean that there is one special poison, or only one kind of sepsis. It would now seem that there are probably many kinds of sepsis. That is, you may have sepsis which would be virulent under any conditions. Sepsis, therefore, may mean different diseases.

As another cause of pelvic inflammation, may be men-

tioned *new growths*—especially new growths which have begun to break down and undergo necrosis. Probably cancer, after it has reached the stage of breaking down and forming necrosis, produces a condition which is more or less one of inflammation.

As to the *treatment of endometritis*, I have so lately gone over that subject, that I will now say only a few words. In the first place, it is necessary to free one's self of the old idea, that everything is due to displacement or some curious mechanical condition—to a fall, or exposure to cold. Exposure to cold and a fall can only act as a match to light up a fire where it is ready to blaze. An inflammation of the uterus is like an inflammation anywhere else, with this important difference: The congestion of menstruation occurs every month, and the lining membrane of the uterus is filled with glands and follicles. Many of these are deep seated, and have a long canal leading from the cell to the surface. In tissue of this kind, you would expect very different results from what you would in inflammation of other tissues. If, for instance, it were an infectious disease, like gonorrhœa, you can readily understand how it might engraft itself upon the deep glands and follicles, and be very difficult to cure. You should not give the uterus any treatment which will result in a scar afterwards. A scar there behaves differently from scars in almost any other tissue. It is almost sure to stop up the mouths of the glands and follicles; the secretion may go on taking place underneath the scar, but owing to the presence of the latter drainage is imperfect; small tumors, or hard, nodular tissues form, which produce all kinds of local and reflex symptoms.

What I wish to impress upon you in treating the uterus, is simply to use good surgical rules. That is, first secure, as nearly as possible, perfect drainage; then scrape off the surface, and make simple applications rather than strong ones, or such as are liable to result in forming a scar. If you have the dexterity to secure good drainage from the uterus

by these means, you will be able to cure almost any form of chronic endometritis.

But in carrying out local treatment, you should not forget the general condition. Do not forget the influence of constipation—not alone because it affects the condition of the blood, and makes all abnormal states more serious, but because it also acts directly upon the uterine tissue. A woman cannot strain at stool; she cannot have the colon greatly distended without producing a very bad result upon the uterus, especially if the uterus is at all abnormal. To impress the truth of this statement, simply watch a patient straining under the influence of ether, vomiting, or exerting great force at stool. One prolonged effort in emptying the bowel, will do more to displace the uterus and injure the ligaments than a fall could do, unless indeed, the fall was sufficient to break the bones of the pelvis, or kill the patient.

As to *inflammation of the uterine appendages*, it may be stated that it is almost always preceded by inflammation of the lining membrane of the uterus. Not long since we did not understand diseases of the tubes and ovaries. They were called cellulitis, and treated as such. Looking back ten or fifteen years, it seems almost incredible that such mistaken ideas could have prevailed regarding peri-uterine inflammation. Now we know that ninety-nine times out of a hundred, the cases which were once called cellulitis, and treated as chronic cellulitis, were nothing more nor less than disease of the tubes and ovaries; that nine times out of ten, if not ninety-nine times out of a hundred, when a woman had a pelvic abscess, it was not due to cellulitis, but to disease of the tubes and ovaries; that is, it was a sequel of salpingitis.

As to the *cause of inflammation of the uterine appendages*, it is, as said before, nearly always preceded by endometritis. Almost always inflammation of the Fallopian tubes and ovaries reaches these organs through the uterus. That is, septic salpingitis and oöphoritis, are almost always preceded by septic endometritis. Unfortunately, what might have

been a mild condition had it remained limited to the uterus, becomes a very serious one when it reaches the tube. This is explained by the fact, that while there is any opening from the uterus at all, there is more or less drainage, and where there is even partial drainage, septic troubles are comparatively mild. Take, however, the same poison or the same disease when located where drainage is almost impossible, and the results are very different. That accounts for the fact that there may be a simple catarrhal endometritis, or a septic endometritis, and the patient not have very serious symptoms. If it occurs in the puerperal condition when the septic agent may reach large veins or the lymphatics, general sepsis may develop. But take a simple case of chronic endometritis, put in a tent of any kind, obstructing the cervix while causing the uterus to contract, and some portion of these fluids which are comparatively innocent, so long as they remain in the unobstructed uterus, will be forced up into the Fallopian tubes and cause a much more serious condition. The reason is, that the anatomy of the Fallopian tube and its surroundings, is such as to make it almost impossible of drainage. When the septic poison reaches it, it becomes swollen, congested, hypersecretion or exudation takes place, and the fluids being unable to escape in any other direction, pass into the peritoneum. The moment septic matter reaches the peritoneum, an attempt is made to surround it and shut it off by lymph, and thus adhesions form.

If the poison is capable of producing pus or active sepsis, it is only a question of time when the inflammation of the Fallopian tube will cause, first, allocal peritonitis, an oöphoritis, and, when the corpus luteum is formed, this also becomes infected, and we have a pelvic abscess; or, perhaps, a distended tube or a cyst of the ovary may burst through the adhesions, exciting a peritonitis. If pus escapes it will burrow, and be likely to pass out through the rectum, but sometimes through the bladder, through the vagina, or into the general peritoneal cavity and cause death.

While salpingitis is nearly always directly due to exten-

sion of inflammation from the lining membrane of the uterus, there are *exceptions*. The cause may be a dermoid cyst, an ovarian tumor, or some other kind, or cancerous disease. The ovarian tumor may grow, its pedicle become twisted, the circulation be interfered with, causing it to break down and form a pelvic abscess, or some degree of inflammation, independent of any condition of the lining membrane of the uterus. Again, it is not uncommon to find disease of the tube and ovary on the right side, complicated by disease of the vermiform appendix. You may be in doubt whether the disease of the vermiform appendix started the disease of the tube and ovary, or *vice versa*; but, as a rule, if I may repeat, endometritis of some form, whether septic, gonorrhœal, or otherwise, is the cause of peri-uterine inflammation and of inflammation of the uterine appendages.

The difficulty in *treating inflammation of the appendages* is one of drainage. There are only two ways of accomplishing it. I refer to cases of acute inflammation, with the formation of fluid or pus about the diseased tube and ovary. If you leave it, it may become more or less absorbed, isolated, and localized, but the tendency is for the pus to go on accumulating in the tube; and if nature does not make an opening in some other direction, it will burst into the peritoneum and cause fatal peritonitis. The proper course to pursue where pus exists has now been fully decided upon. Before we learned that we could safely open the belly and remove the entire disease and effect a radical cure, it was the custom to drain through the vagina. But now, where the woman's general condition is so low that you dare not do laparotomy, scarcely any gynæcologist would pretend to cure disease of the appendages by drainage through the vagina. The rule is, where nature has not established a drain, to open the belly and remove the abscess and diseased structure.

The suggestion has been made to dilate the uterine end of the Fallopian tubes, and drain in that direction. Some have even claimed to have diagnosticated double pyosal-

pinx (treated the patient), and that she afterward bore children. I can only say there must have been a mistake in diagnosis; there is no other explanation for it.

With regard to the minute pathology of inflammation of the uterus, I have made no special study of it, and I doubt whether, if I had, my views of the etiology would be materially changed on the principal point laid down during this lecture—namely, that catarrhal inflammation of the uterus is not different from catarrhal inflammation of the throat, nose, or other mucous membrane, except that the glands and follicles are differently placed. They are so deeply situated that, when once diseased, they are difficult to cure, and once a month menstruation stirs up the disease. You cannot remove the disease by simply scraping. You can thus remove a portion of it, but in many cases, if you go no further, the disease will continue to re-appear. Whether it is a renewal of the original disease, or whether the disease remains in the deep glands, there is some doubt; but it is my belief that the latter explanation is the correct one. An analogy is seen in the case of gleet in man, which is very difficult to cure, because the disease seems to creep into the deep glands about the urethra, where it is not accessible to ordinary measures. The same remarks apply to gonorrhœa in the vagina; when it gets to the bulbo-vaginal gland, it nearly always results in a large tumor, due to hypersecretion and defective drainage; then, in an abscess, and perhaps a sinus, which will fill and empty at intervals for years, a cure being finally effected only after the whole mass has been removed or scraped away.

In the case of disease of the glands and follicles in the uterus, it will not do, as I have already stated, to burn or cauterize in a way to make a scar. That is why I have always denounced, in endometritis, the use of the actual cautery or the galvano-cautery. My belief is that there is no form of galvanism which has much influence on chronic endometritis or uterine hæmorrhage except the destructive form. Where the mucous membrane is destroyed in this manner, a scar will almost surely form, the result of which

will be much worse than the original disease. It was observation of the effects of scars left by nitric acid, chromic acid, nitrate of silver, etc., which led to the discarding of such agents years ago. Women treated by those means often had, at the time of the menopause, severe reflex symptoms arising from scars on the lining membrane of the uterus. We know now that just as good immediate results are obtained from applying to the uterus well recognized principles in surgery. That is, by dilating or divulsing the canal, scraping out the cavity, and keeping up drainage long enough for the endometrium to become cured.

There has been some discussion as to whether there can be an inflammation above the os internum. Dr. Emmet, and some others, claim that since the uterus is not lined by true mucous membrane above that point, it cannot become inflamed; that what we diagnose and treat above the os internum as endometritis is not true endometritis—that it is some form of cellulitis, or some special disease of the broad ligaments. I cannot accept that doctrine. I am satisfied that where there is well marked dysmenorrhœa, there is a chronic inflammation of the endometrium at and above the os internum. Not infrequently there is such a severe inflammation of the lining membrane of the uterus that it results in a metritis or inflammation of the uterus itself, and by continuity even reaches the peritoneum, independent of disease of the tubes and ovaries. I admit these cases are rather rare. Where there is displacement with adhesions, and no disease of the tubes and ovaries, it seems evident that the inflammation has not passed out through the tubes, but directly from the uterus to the adjacent structures.

One of the most common mistakes of eminent gynecologists consists in calling these cases of acute inflammation of the uterus cases of local peritonitis. You can readily imagine what leads to the mistake in diagnosis. The uterus is somewhat enlarged; the peritoneal coat congested, if not inflamed; the slightest touch of the abdomen is conveyed to the top of the uterus; there are, in fact, about all

the symptoms of a local peritonitis, and, as I have said, in some cases actual peritonitis, without inflammation of the tubes and ovaries.

So difficult is it to make the diagnosis in sensitive, delicate women, that we not infrequently have cases sent to us from the country with a diagnosis of repeated attacks of peritonitis; yet, on placing the patient under the influence of ether, no evidence whatever is found of there having been a peritonitis. The supposed attacks of peritonitis had simply been attacks of acute inflammation of the lining membrane or other structures of the uterus. Only recently the wife of a doctor, the daughter of a well known physician, came to me with a history of having suffered for years, and that she had had treatment until she was tired of it, but wished to be cured. On examining her, I found simply an imperfectly developed uterus. I told her she could be cured by stopping the function of the tubes and ovaries, but advised her to first take ether, have the uterus dilated, scraped, and drained. Dr. Emmet was present, and while neither of us could recognize disease of the tubes and ovaries, we were of opinion that a cure could not be effected in any other way than by their removal. But no one had recommended this procedure. Dr. Emmet had treated the patient for two years, and he told me himself that while she was under his care she had had several attacks of peritonitis; that even after she was examined somewhat roughly a fresh inflammation would be set up. Finally, he came to the conclusion that nothing would cure her except removal of the tubes and ovaries; that probably in them existed pus. When I examined her, I found the fundus somewhat movable; no enlargement of the tubes or ovaries; no positive signs of any adhesions. I got the impression, therefore, that there must have been a mistake in diagnosis; that the woman had never had a peritonitis; that what was supposed to have been peritonitis was only an acute inflammation of the uterus. I then decided to take the bull by the horns, or rather the woman by the uterus, dilate, scrape out, put in a drainage, and take the consequences; for Dr.

Emmet had warned me against even an examination, as it might set up an active inflammation. If he had been correct in his view, the woman would have had a chill and a local peritonitis certainly within twenty-four or forty-eight hours. But she had not. There was not even a rise of the temperature above 99.5° , and no bad symptoms. I am satisfied that she never had a peritonitis; that the attacks which so closely simulated it as to deceive so able a man as Dr. Emmet were simply inflammation of the uterus, giving rise to the subjective symptoms of peritonitis.

I have cited the case to illustrate the importance of distinguishing between cases of inflammation confined to the uterus, and that which extends to the neighboring organs or tissues.

ART. V—**Vesico-Vaginal Fistula—The Calculous Diathesis, and Uretero-Vaginal Fistula Complicating It—An Original Expedient in the Operative Treatment of the Latter.***

By **HENRY FRASER CAMPBELL, M. D., of Augusta, Ga.**

PROFESSOR OF SURGERY, MEDICAL COLLEGE OF GEORGIA, ETC.

I do not for a moment deny that calculus in connection with vesico-vaginal fistula does often take its origin subsequent to the closure of the fistula, and especially when there may be already existing a *nucleus* in the bladder for its accretion. During the late war, while in charge of military hospitals in Richmond, I was present at an operation by the late Charles Bell Gibson, M. D., then Professor of Surgery in the Medical College of Virginia, for the removal of a calculus from the bladder of a woman who had been previously operated on for vesico-vaginal fistula. A soft phosphate of lime calculus was removed by vaginal cystotomy, and a loop of the silver-wire suture was found to be the nucleus of the concretion, while, on one of the other loops, still hanging to the tissues of the bladder, there were found similar, but

* Part of a paper read before the Southern Surgical and Gynecological Association, November, 1890, in Atlanta, Ga.

much smaller deposits in some cases. I will briefly relate a case of my own in which repeated reformations of calculus concretions took place after vaginal lithotomy had been performed.

Persistent Calculous Elimination and Accretion in the Bladder, Continuing Many Years after Vaginal Lithotomy and Closure of the Incision by Sims' Operation. C. B., a mulatto woman, aged about twenty-five years, nulliparous, living at Edgefield, S. C., was found by Dr. J. Walter Hill, of that town, to be subject to vesical calculus, and I was requested by Dr. Hill to operate. Vagino-vesical cystotomy was done, the incision being about one inch and a half in length. The stone, which seemed to have been precipitated upon a *hardened blood-clot*—for it was hollow, stained, and friable—was crushed in the forceps by a very moderate degree of pressure. The fragments, after washing out the bladder, weighed somewhat less than half an ounce. The incision was closed by thirteen silver wire sutures, and healed without incident. The sutures were removed by Dr. Hill about the tenth day after the operation.*

It is remarkable to observe the difference in the facility and rapidity of the healing, when the clean edges of a recent lithotomy incision are brought together, as compared with the pared tissues around a fistula resulting from the slough of retarded labor. Dr. Emmet says, "fistulas won't keep open when you want them to remain open," as in his incisions made for the cure of chronic cystitis.

But to return to the question of calculous formations following operations on the septum. This woman, for a long time previous to lithotomy, had suffered from great disturbance of her urinary organs, and the occasional voiding of gravelly materials—sometimes with hæmaturia, and doubtless this was the origin of the blood-clot nucleus of the stone extracted.

Having lost sight of the woman for over twenty years, I have incidentally heard recently, that she lived in Augusta and heard from my friend Dr. A. H. Baker, that she had again,

* Reported in a full essay read before the American Medical Association at the thirtieth annual meeting, Atlanta, May 6th, 1879. "The Surgery, Etiology, Therapeutics, and Hygiene of the Urinary Calculus." Vol. XXX, p. 626.

while in the employment of a family as servant, become the subject of calculous deposits, and that he had removed a calculus from the bladder that was in process of being ulcerated through the vesico-vaginal septum. To his surprise, the incision made for its removal was not followed by a fistula—the stone being apparently situated external to the mucous membrane of the vesical cavity. I have since had her under my own care for vesical inflammation, in which calcareous deposit in the urine was a prominent feature of the case.

Illustrations of the Rapid Precipitation of Calculous Elements in the Bladder. It is an unquestionable, familiar, and well-recorded fact, that in certain constitutional conditions the spontaneous production of calculous concretions in the bladder is one of the most inveterate and ineradicable of all diatheses to which the human system is liable:

In July, 1859, I operated upon S. O'B., of Barnwell county, S. C., for multiple calculi, performing Dupuytren's bilateral section. I removed at the operation, fifty-eight calculi ranging in size from the smallest split-pea to that of a pigeon's egg. Just ten years previously—July, 1849—the late Dr. Paul F. Eve, then Professor of Surgery in the Medical College of Georgia, had operated on the same patient, removing one hundred and seventeen calculi, varying in size as those removed in my operation. Dr. Eve had also adopted Dupuytren's method. During the war, in April, 1863, O'B. again came to Augusta to be operated on; I was absent at Richmond, and finding that Dr. Eve was in charge of the military hospital at Atlanta, he applied to him, and he was lithotomized *the third time* for the accumulation of phosphatic gravel in the bladder, and some eighteen concretions were at this operation removed—making in all 193 calculi removed from the bladder, the mass of which, being carefully weighed, amounted to at least five ounces.

The patient stated that he had begun "to pass gravel-stones" before he left his bed, where he was long confined by an injury to his spine in 1824, from the fall of a horse on his back. No one can estimate the amount of this calculous matter during the thirty-nine years, viz., from the time of his spinal injury in 1824, till that of his death in 1863.

This remarkable modification in the function of the uri-

nary organs was at the time interpreted as being due to perverted nervous action, either direct or reflex, caused by the injury to the spinal centres.

Multiple calculi, though not by any means so common as single or double or triple ones, are not at all unprecedented in lithology. Dr. S. D. Gross, up to 1855, had had but one case, that of a gentleman, aged seventy-six years, removing fifty-four calculi; fifty-five calculi were found in the bladder of the naturalist, Buffon; while Sir Astley Cooper had one case of a hundred and forty-two; Dessault, one of over two hundred; Kruger, Dupuytren, and others had similar cases; Dr. John Kelly, of New York State, removed two hundred and twenty-eight; Tulpins, Boerhaave, and Ribes, each record a case of upward of three hundred; Murat met with six hundred and seventy-eight; Schurig, seven hundred. But the most extraordinary example on record, was the case of Chief Justice Marshall, operated on by Dr. Physic, where upwards of one thousand calculi "from the size of a partridge shot to that of a bean were removed."

With such abundant demonstrations of the rapid and prolonged elimination of calculous materials, in certain constitutional conditions, no one can be surprised that, in some few instances, a case of vesico-vaginal fistula may occasionally coincide with such a diathesis, and be followed in the operation by calcareous accumulations in the bladder. However, with all the support and plausibility given to Dr. Emmet's views as to the origin of calculus found in the bladder shortly after vaginal cystotomy, I still affirm that the calculus found by me, as reported, within three weeks of the closing of the fistula, was not of this character, and had really existed from the childhood of the patient; and, further, I cannot help holding the same opinion in regard to that one among his own cases in which a calculus the size of a hen's egg was removed, not much over a month after his operation of closing the fistula.

Urethro-Vaginal Fistula, Complicating Vesico-Vaginal Fistula; an Original Expedient in the Operative Treatment. Another aberrant case of vesico-vaginal fistula in my own experience

that I will report, is one in which the discharge of urine, after an otherwise entirely successful operation, was due to the very unusual circumstance that *one of the ureters*, which had been involved in the slough of a very large fistula, was so related to the line of union by sutures as to *open* into and discharge all the urine from one of the kidneys into the vagina instead of being poured into the bladder.

Uretero-Vaginal Fistula.—Elsey, a negro woman, sent from Savannah to our private hospital in August, 1860, aged twenty-two years, primipara. The fistula was situated in the *bas fond* of the bladder, and rather to the left side, and large enough to permit two fingers to pass into the bladder.

June 16, 1860. Bozeman's operation was made, eight silver wire sutures were applied. The case had a satisfactory course. Urine was retained, and for a while passed naturally. Apparently, in but a short time after getting out of bed, urine was found in the vagina, but only in moderate quantity; and yet she passed a considerable discharge each day naturally, and when the catheter was applied, the bladder was found to contain a good amount of urine. At night her bed was wet, yet she would have urgent desire to pass water, and did pass it every morning in fair amounts. This state of things, of course, indicated to us that the fistula could not have remained entirely closed.

On examination with Sims' speculum, we could at first see no opening, but soon after urine began to *exude*, apparently from one corner of the cicatrix of union. At this point there was a depression or dimple, from the bottom of which the urine continually oozed. Though we could see no opening, I applied nitrate of silver several times at two days' interval. This was done in the hope of stimulating granulation and union, but without any effect. The urine still continued to collect in good quantity in the bladder, and was passed, with urgent desire, often naturally, but apparently about the same quantity streamed gradually down her legs, or soaked the napkin in the daytime, or wet the bedding at night.

From July 10th, to August 13th, applications of nitrate of silver were at intervals made to the perplexing depression, from which the urine could each time be seen to issue.

August 13th, 1860. On applying the speculum to-day we find it difficult to locate the exact point at which the urine escapes, so perfect appears to be the seam of union extending entirely across the vagina where the original fistula had

existed; but on pressing with the finger on the surface of the vagina, a very minute opening, about the size of a pin's head, is discovered, and water was seen oozing from it.

December 12th, 1860. Finding the opening to resist other treatment, we determined on a second operation for its closure. Bozeman's operation with two silver-wire sutures was made. On 21st suture apparatus removed, and we find the urine still appearing in the vagina, the minute opening still remaining unclosed.

January 15th, 1861. On examination to-day, with patient in knee and breast posture, the minute opening could be distinctly seen. At the moment of the examination a very fine stream, like a minute straw or pin, began suddenly and then continuously *spirted* from the small opening in the commissure of the seam. The manner of the discharge, and the appearance of the opening, now suggested that the discharge was *from the ureter of the left kidney*. A very fine silver probe was used to explore the opening and the direction along which the probe passed for a short distance. This probe could not be made to gain access to the cavity of the bladder. It could not come in contact with the metal catheter passed at the same time through the urethra.

The case was now perfectly clear as one of *uretero-vaginal fistula*. It may be accounted for in the following way: The original or large rent had traversed the course of the left ureter; this tube was so severed as to have its opening in the posterior lip of the fistula. In closing the fistula, this cut end of the ureter must have been so disposed as to be turned into the line of union. The continued secretion from the left kidney, flowing through the ureter, prevented healing *at this point*, and turned the entire stream into the vagina. The original fistula had doubtless healed throughout its entire extent in the first operation. None of the urine which had been leaking since the operation had ever entered the bladder, but had been flowing through the severed ureter directly into the vagina.

Operation—Division of the Uretero-Vesical Septum. December 13th, 1861, assisted by my brother, Dr. Robert Campbell, and our resident physician to the hospital, Dr. A. W. Basleg, the patient was placed in the genu-pectoral posture. Sims' speculum and lateral dilators were used to explore the fistulous opening, which could be clearly seen at the bot-

tom of the depression near the left end of the line of union. A grooved silver probe, to guide the incision, was used as a director. A very delicate bistoury, like a tenotomy knife, was now passed along the probe with the cutting edge directed toward the bladder for more than three-quarters of an inch, until the knife had entered the bladder, thus making a slit in the wall of the bladder of about one-third of an inch in length; thus a small portion of the end of the ureter and overlying mucous membrane of the bladder were slit so as to make the ureteral canal open higher up and enter into the bladder instead of into the vagina. The probe was now pushed fully into the bladder and brought in contact with the sound through the urethra, thus insuring the fact of the free communication required.

The operation was now completed by paring the edges of the cut and closing this vaginal side with four silver-wire sutures. Sims' catheter was used, and the details of after-treatment were conducted as in any ordinary case. After closing the vaginal fistula, of course, no means could be used to keep open the new opening in the uretero-vesical septum, nor was any measure of the kind thought of, as the constant pouring into the bladder of urine from the kidney we felt certain would keep this artificial entrance permanently free. This woman remained some weeks in the hospital after getting up. There never was the slightest return of leakage or of any other inconvenience from the date of the last operation.

In considering the various expedients used by the general surgeon for restoring to their proper receptacles the secretions escaping from wounded or severed excretory ducts, it will be at once recognized that the exact prototype of the above operation is to be found in cases where such accidents occur in which, from wounds upon the cheek, a salivary fistula may be left by a wound in the duct of Steno or the parotid duct. In such cases the wound is enlarged and afterward healed after the proximal end is so disposed as to secure the discharge of the saliva anywhere within the buccal cavity.

Uretero-Vaginal Fistulæ.—This particular form of urinary fistula has, for a long time, been regarded as one of the most perplexing in the verification of its diagnosis—which, indeed has been illustrated in the foregoing case—and at the

same time also one which is perhaps the most difficult of safe and successful treatment.

On account of the recognized importance and the great interest attaching to these cases, I have given a more extended record of this one from the current history found in the *Record Book* of Jackson Street Hospital than of any other here presented. To close the excretory duct of one of the kidneys in our attempt to arrest a flow of the urine into the vagina, may be considered a measure endangering the health, and perhaps the life of the patient, in order to obviate what may be regarded as a non-fatal, though a most distressing inconvenience.

"Simmons'* first attempts at treatment were to render the vesical portion of the severed ureter pervious, and then to close the vaginal side of the fistula; but the operation was followed by violent symptoms of retention of urine, and the vaginal wound re-opened. He, therefore, with others, entertained the opinion for a long time that cure was to be obtained only through an indirect method, namely, kolpokleisis, with the previous re-establishment of a vesico-vaginal fistula." . . . "Later, however," continues Dr. Jenks, "he advocated perforation of the bladder at the site of the fistula, and, that the ureters might not be occluded by closure of the original fistula, its anterior wall was slit up. To this a sound was passed from the bladder, through the artificial opening, into the ureter upon which the utero-vesical wall is cut (from the bladder) one-fourth to three-fourths of an inch. The ureteral slit is kept open by the daily passage of a large sound. By this method the mouth of the ureter is removed to a sufficient distance to insure it against being included in the deep suture which is to close the vaginal wound."

"Henry F. Campbell, of Georgia, has obtained a perfect and speedy result," continues Dr. Jenks, "by a similar (?) though simpler procedure. A small bistoury was passed into the ureter, slitting the anterior wall and penetrating the bladder. The vaginal surface about the opening was then vivified and coapted by silver sutures. . . . The first successful case, in this country at least, was recorded in 1867, by Dr. T. Parvin. With a trocar he formed a new

* *System of Gynecology by American Authors.* Edited by M. D. Mann, A. M., M. D., of Buffalo. Vol. II. Article, "Urinary Fistulae" By E. W. Jenks. Page 430. Philadelphia: Lea Brothers & Co. 1888.

channel into the bladder for the ureter. He made a superficial vivification of the vaginal surface and a portion of the anterior lip of the cervix, and was thus able to suture the vaginal side of the opening without encroaching upon the lumen of the ureter."

It will be seen in the present report of my operation, as detailed in the history of the case I have been describing, that Dr. Parvin's use of the trocar, though original and quite ingenious, is *entirely different* from the simple operation performed by me; and, further, while his case was recorded in 1867, ours was performed and recorded in 1861.

We find in the excellent and widely read work of Prof. T. Gaillard Thomas* the following:

"An exceedingly interesting instance of this variety of fistula," says Dr. Thomas, "is mentioned by Zweifel, of Erlangen, in which he *removed the left kidney* of the diseased side with a successful result. The right kidney, which was left, proved quite sufficient for the wants of the economy."

In respect to this case, I will venture to remark here that the distress caused by such a fistula, and the perplexity attending its closure by other and less dangerous devices, must have been extreme indeed, when the surgeon was willing to resort to this last and most hazardous of all expedients—the extirpation of a kidney—in order to dispose of its own secretions! In my opinion, it was at least a questionable, if not an unwarrantable, procedure. The great importance, as well as the trying perplexity of this kind of fistula is, however, pointedly exemplified by this case and the extreme measure resorted to for its relief.

Dr. Thomas, than whom there is no one more familiar with the subject, seems, however, fully to appreciate the entire uniqueness, as well as the simplicity and safety of the operation devised and performed by my brother and myself in 1861. He says,† in this connection: "Dr. Henry F. Campbell, of Georgia, reports an interesting case of utero-

* *Practical Treatise on the Diseases of Women.* By T. Gaillard Thomas, M. D., etc., etc. Fifth Edition. Henry C. Lea's Son & Co., Philadelphia. 1880. Pp. 263, 264.

† Fifth Edition, page 263.

vaginal fistula which he cured by this simple procedure—passing a small bistoury up the ureter, he slit the anterior wall, the knife passing into the bladder. He then closed the vaginal surface of the cut thus made with silver suture. The patient rapidly and entirely recovered.”

The operation was briefly described in the discussion of a paper read on the subject at a meeting of the American Gynæcological Society. This discussion will be found also in the notes of the proceedings of that meeting, as reported for the medical journals of that date.*

Before closing this report of my own experience, and which might well be entitled, “Some of the Perplexities of Vesico-Vaginal Fistula,” I will briefly summarize the following conditions as offering explanation to that particular sequence which sometimes annoys, and even perplexes, the gynæcologist when he finds leakage of urine to continue after some of his operations, in which he has, with the greatest faithfulness and skill, successfully closed the fistula :

First, and probably the most frequent cause of such apparent leakage is contraction and loss of vesical capacity, incident either to actual loss of bladder-wall by sloughing or from non-distension by prolonged drainage of the bladder through the fistula.

Second.—Irritability of the bladder from cystitis, causing frequent, and even involuntary discharges by the urethra.

Third.—The presence of calculi in the bladder, formed either before or after the operation, and due to the calculous or phosphatic diathesis.

Fourth.—The cervix uteri turned into and retained within the cavity of the bladder as an emergency of the operation.

Fifth.—A minute vesico-vaginal fistula, existing at the time of the operation for the principal or large fistula, but independent of it, and only to be discovered after the distension of the bladder caused by its closure.

* *The American Journal of the Medical Sciences*, January, 1880.

Sixth.—One of the ureters, whether cut during the paring of the fistula and left in its closure, in the line of union, or involved in the original slough—either constituting uretero-vaginal fistula—will discharge the urine from the kidney of that side directly into the vagina instead of into the bladder. This condition also can only be verified after entire closure of the principal fistula.

Seventh.—One of the loops of a silver-wire suture may have been left intentionally to hold a weak point in the line of union and afterward overlooked or forgotten, or may have inadvertently escaped removal. Such a condition will produce irritation, and may accumulate concretions and become the nucleus of a calculus, or even re-open some point in the line of union.

In reporting the foregoing list of cases from the Note Book (formerly kept) of Jackson Street Hospital, or from my own notes of private practice, I have selected only such as I considered *aberrant and unusual*. This selection was still further restricted to such as were found to illustrate or explain some practical principle in the history of vesico-vaginal fistula that could be recognized as common to them all. Extensive or entire destruction, by sloughing, of the septum, with an unmanageable loss of both vaginal and vesical wall, together with cervix uteri, etc., is certainly *aberrant*, and I am glad to say, though sometimes occurring, they are very *unusual*. One or two such cases have been presented to me, but not very strongly approving myself of “*kolpopleisis*,” as entire closure of the vulva and vagina has been suggested and named by Simon, I regarded such cases as *among the incurables*, and refused to attempt more than a palliative treatment. However, in one case, I explained the operation to the woman, telling her at the same time that it was more simple and easy of performance than were many of the other operations for vesico-vaginal fistula; but she rejected it with disdain, saying “she greatly preferred to be left as she was.”

But the one point of deepest interest and concern to both the patient and the surgeon, in that deplorable condition

known as vesico-vaginal fistula, is the all-important question which relates to the success or failure of the operative procedure made for the entire closure of the opening in the septum between the bladder and the vagina, to arrest *permanently* the involuntary flow of urine. As in my own experience a considerable number of conditions have been found to cast disappointing and perplexing doubt upon this question, I have grouped them together, classing them upon this one common symptom, *of the leakage of the urine after the operations intended for its permanent arrest.*

That the causes of this leakage, or apparent leakage, are numerous, that they are varied, and that they are difficult of verification, the several instances I have presented in this paper will abundantly illustrate. If, by the candid and open avowal of my *own* difficulties—sometimes failures perhaps—in readily arriving at the true source of my own perplexity, I may become serviceable to others who may hereafter find themselves similarly perplexed, I will feel amply rewarded in giving this unqualified rehearsal of my own experience.

ART. VI.—Heredity—Some Reflections on It.

By J. S. DORSET, M. D., of Bonham, Texas.

LATE SUPERINTENDENT TEXAS STATE LUNATIC ASYLUM, ETC.

Heredity is that biological law by which all beings endowed with life, tend to repeat themselves in their descendants. "Will grapes grow upon thistles, or figs upon thorns?" Can the offspring of the low, and vicious, ignorant man be but like the fruit of the tree which brought it forth? That there are exceptions, there is no doubt, but it is not the rule, and it is as hard for one born and raised in the environments of low degradation, morals, and vice, to be a pure, moral, refined, scholarly gentleman, as it is for a "camel to pass through the eye of a needle."

Yet there is a species of moral depravity found in the children of the most refined; even the children of the clergy

depart from their early training of precept and example of their parents, and the number is great. If we will look back perhaps no farther than the grandfather, the traits so much to be deprecated may be found. A man may inherit his ancestor's intellect, his honors, his estate; but he must also take with these his diseases, vices, and other moral and physical obliquities. "The parents have eaten sour grapes, and their children's teeth are set on edge." These are some of the laws of heredity which are as immutable and unchangeable as the laws of the Medes and Persians.

Take the dipsomaniac. While the great desire for alcohol may not develop in his offspring, you may find it developed in another direction, such as idiocy or insanity; and if, perhaps, the immediate child may not exhibit mental or physical obliquity, wait; it will crop out in the grandchildren. Dipsomania, which used to be termed as merely a physiological condition, is now recognized by psychologists as a loss of will power, a disease of the brain, inherited or acquired, and the writer asserts, without fear of successful contradiction, it is a disease hereditary as any other, or as any characteristic in feature, limb, or trunk.

When a child equally resembles father and mother, the case needs no explanation; it is the realization of the ideal law as far as that is possible. When he resembles one parent to the exclusion of the other, this exclusion does not really take place; that parent whose influence appears to be lost, may re-appear in the next generation or later. A man may have latent inherit traits of character undeveloped, may marry and have children, and yet not discover the hidden spark; the wind which blows the ashes from the hidden spark of years, will come; if not in his generation, it will come, even if later.

Darwin remarks truly that these facts oblige us to admit, that certain characters, aptitudes and instincts may remain in the latent state in individuals, and even in a series of individuals, while yet we are unable to find any trace of their presence; and on this hypothesis, the transmission of a characteristic from grandfather to grandchild,

with the apparent omission in the immediate parent of the opposite sex, becomes very plain. Frederick William I—the father of Frederick the Great—who was noted for his love of colossal men, dealt with his regiment of giants, as stock-breeders deal with their cattle. He would not allow his guards to marry women of stature inferior to their own; and the writer respectfully recommends this rule of Frederick William to all who contemplate taking as serious a step as marrying. But while these guards may have been giants in stature, they may have been Lilliputians in brain. So it will be as well to look well to the mental condition when you select a mother or father for your children. Heredity is a law, a natural law, and we may as well expect to escape co-equal law of nature—death—and live forever, as to dodge the law of heredity. If a man lives, he shall die; nothing that has ever been, can cease to be. This it is which fixes us in the indestructible law of causes and effect, and by which our poor personality is connected with the ultimate origin of things through an infinite concatenation of necessities. Heredity is but one form of that ultimate law by which physicists is called, the conservation of energy, and by metaphysicians, universal casualty. The subject presents a large field yet unexplored, and for the present I must yield it to others more fitted to cultivate it properly than is the writer.

Clinical Reports.

Laparotomy for Hystero-Epilepsy—Return of Menstruation, Epilepsy, and Mental Wreck.*

By GEORGE R. WEST, M. D., of Chattanooga, Tenn.

I do not propose to attempt the discussion of the usefulness of oöphorectomy for mental diseases, but to relate a case and ask a few questions in connection with it, hoping that the answers may entertain and instruct us.

In the spring of 1889, Miss T., a fine-looking blonde of

* Read before the Chattanooga Medical Society, March 6th, 1891.

22 years of age, became my patient. She was intelligent, large, and quite strong, and weighed one hundred and fifty pounds. I was called to give relief for some kind of spells which she had each month just before her menstrual periods. At that time she would become morose, would not talk, had no appetite, and usually had two or three convulsions lasting from ten to thirty minutes each.

Her menstruation began when she was fourteen, the convulsions appearing a few years later, but did not become regular until she was nineteen. She had been treated by many physicians with no relief, over a period of many years, and I was called in at a time when they were desperate, and willing to do anything which would give a chance for cure.

I found her the type of health, and apparently a perfect and well-developed woman. After a careful examination of her history, I made an examination of her pelvic organs, expecting to find the cause of the trouble there. The cervix and os were normal, the uterus anteflexed and movable; the left ovary was enlarged, and thought to be adherent; the right ovary tender. No aura starting from the ovary could be traced, and pressure over the ovarian region seemed to have no effect towards diminishing the attack. Little or no leucorrhœa; os so well open that mechanical obstruction could not be entertained, and as the cause of her trouble was so evidently associated with menstruation or ovulation, the removal of her ovaries was suggested to her, and the operation explained. The family consented to the operation, the poor girl saying, "Do anything if you think you can relieve me; if you cannot, let me die, I do not want to live with this dread of a coming convulsion hanging over me all the time."

Dr. Robert Battey was called in consultation, and while agreeing in the diagnosis, and thinking the operation might be the only resort in the future, suggested that she be placed on depleting doses of Epsom salts, and the constant use of large doses of bromide of potash, and the effect watched for awhile. This was done, and instructions were given that I must be called again in a few months if there was no improvement.

It was nearly eight months before I was again called. I then found her much worse than when I first saw her. On the salts and bromide she did well for several months, and the medicines then seemed to lose their power and were discontinued. I found the young lady's condition growing

serious; she was forgetful, listless and irritable, showing that her mind was becoming affected by these oft-repeated convulsions, which were now more severe and of longer duration.

On the 12th of December, 1889, I removed the ovaries. It is unnecessary to deal with the details of the operation.

I would, however, call attention to my mode of going through the abdominal walls. I make as small an incision as will answer my purpose, and prefer to go through the rectus muscle, rather than along side the linea alba, because the cicatrix resulting from a separation and laceration of the muscular fibres is more secure than that formed by a re-union of the muscle and its sheath, as when the linea alba is divided; and, therefore, the danger of ventral hernia lessened.

The right ovary was found to be the size of a hen's egg and filled with small cysts; the left was bound down to the side of the pelvis by adhesions. In its removal it was deemed better to take only that part which could be encircled by a ligature rather than attempt to break up the firm adhesions. By so doing, a very small portion only of the ovarian stroma was included in the stump which was supposed to have been rendered harmless by the strangulation caused by the ligature.

The girl made a good recovery, had no convulsions with the metrorrhaxis, which usually occurs the third or fourth day after these operations; pulse and temperature reached their highest, 112° , and 101° respectively, on the sixth day on account of a stitch abscess, and some difficulty in getting her bowels to move.

The time for the next menstruation was looked for with great anxiety. It came, but she had no show and no convulsion; the second and third passed with no symptoms of her former trouble, and I discharged her as cured.

Six months later, however, judge of my surprise and disappointment to learn that the periods had returned, and the convulsions were worse than ever. They returned the fourth month; the bloody discharge was profuse, and the attacks were much longer in duration than before, and the poor girl's mind was slowly, but surely becoming a wreck.

I would ask the Society in this dilemma what should be done? In the first place was the operation justifiable?

If another operation, then have I any assurance that I would stop menstruation by the removal of the piece of ovarian stroma remaining on the left side?

If the members think I have that assurance, then do they consider ovulation in general to be the cause of menstruation? And that menstruation is a necessary result of ovulation?

If the ovulation in the bit of stroma left is the cause of the continuing menstruation, how can we argue as to the function of the different ovaries in ovulation?

Is an egg discharged from each at every period, or do they act alternately? If they act alternately, why does not this girl rest one month and menstruate the next?

The "habit theory" is disproved by this cessation for three months.

Correspondence.

Caution About Chlorate of Potassium—Seven Cases of Fatal Poisoning—One Nearly Fatal.

Mr. Editor—As this is the season when chlorate of potassium is so frequently given, it is well for the profession to inform its patrons of the fact that it is sometimes a poison: "a substance which, when absorbed into the blood, is capable of seriously affecting health, or of destroying life." My attention was recently recalled to this fact by the recital of a fatal case by a lady:

A beautiful and interesting child, about eight years of age, had some throat trouble, and its mother went to a country store near by and purchased some chlorate of potassium. The merchant was probably giving her an ounce, when she said that she wished more. She returned home, put all the chlorate in a glass of water, and the child at once drank all of the solution, and hopefully told its mother that it would soon be well, as it had taken all of the medicine. The child died in about a week.

In the books at my command, in a small country village, I find six cases of death from chlorate of potassium, and

one case nearly fatal. I have not looked through all of the journals at hand.

First case (*Amer. Med. Times*, April, 1861).—One ounce killed.

Second (*A. J. P.*, 1878, p. 113).—Half an ounce killed.

Third (*Lon. Med. Record*, 1879, p. 424).—Killed, but amount not given.

I will quote fully the fourth case (*Med. News*, 1876, Vol. XLIX, p. 361), as it illustrates unusual virulency:

"A workman was given two ounces, with verbal instructions to use it for gargling; the only instruction on the prescription, however, was a coffeespoonful in a glass of water. His wife gave him a spoonful at one o'clock, and another at two, and half a spoonful about five, and another about six. Abdominal pains and diarrhœa set in shortly after the first dose. At 7:30 profuse perspiration came on, and about nine sleep. At ten he became unconscious, and at one in the morning death took place."

The fifth case is that of Dr. Fontaine, "who took an ounce to demonstrate its innocuousness. Violent gastro-enteritis was produced; at first there was free diuresis, but urinary suppression followed, and death occurred in seven days."—(Bartholow, *Mat. Med.* 1888).

Sixth case (Biddle's *Mat. Med.*, 8th Ed., p. 365): "Death was produced by a tablespoonful."

The case which was nearly fatal (*Va. Med. Monthly*, Vol. XI, p. 408): "A young man had been at work in the factory of Parke, Davis & Co., engaged in making lozenges of chlorate of potassium. He was attacked by symptoms resembling scarlet fever. High fever, vomiting, became delirious. On the second day a rash appeared—at first erythematous, then somewhat papular. The next day the skin all over the body appeared as if it had been macerated in hot water. You could roll it up in folds. After this it became dessicated, and finally it desquamated. The patient lost one eye by extension of the affection of the skin to the cornea. He confessed having eaten pretty freely the chlorate of potash lozenges, supposing them quite harmless. In the early part of the attack he had hæmaturia. The mucous membrane of the mouth was also affected."

A pertinent inquiry is, Why chlorate of potassium is so poisonous in some cases, while the public often, with apparent impunity, with and without the sanction of the medi-

cal profession, drink so freely of solutions of unknown strength, and eat the salt and lozenges as if they were candy? Is it not because there has been no exclusive process given for its manufacture in the United States? Much chlorate of potassium is imported. Are deaths ever caused by it in Great Britain? where it is ranked among the Preparations, with a given formula, and not ranked, as with us, as a somewhat crude article—an article of the *materia medica*? Case fourth above was reported from Vienna, Austria. It is not patriotic; but in prescribing, the British article had better be specified, as, characteristically of the better class of Englishmen, it is well washed.

The most frequent impurities of chlorate of potassium are chloride of potassium and chloride of lime, neither of which, of course, are given internally. A solution of chloride of potassium is used for removing fruit-stains from linen. Chloride of lime is used for drying gasses, freezing out certain substances from water, bleaching, and disinfecting-

In addition, there may be too large a percentage of chlorine left in the chlorate.

The chloride of lime, on account of its affinity for water, and its other properties, is more poisonous than the chloride of potassium.

A rough test of *chloride of lime* is to throw some of the chlorate of potassium upon live coals; a reddish flame shows the presence of lime.

Our chlorate of potassium may be too cheap to justify sufficient purity.

In poisoning by the chlorate of potassium, the symptoms must be treated *pro re nata*. We have no antidote for such a compound poison. And yet, when toxic effects are apprehended or occurring, albumen, the various baths to aid the kidneys, jaborandi, and stimulants, fresh air, and no meat, should compose the antidotal remedies.

Theoretically, those indirect diuretics with which much fluid must be given, are contra-indicated, for the gaseous

element may be doing the poisoning; and in the presence of water chlorine is most active.

How many deaths attributed to diphtheria and scarlet fever are caused by chlorate of potassium, as prescribed in America, will never be known. Dr. A. Jacobi, as early as 1876, called the attention of the profession to this matter.

A few years ago, two of our text-books, the infallible guides to the young practitioner, were very prodigal in its dosage. The *U. S. Dispensatory* (Wood & Bache), 1873, says: "No nicety need be observed in the dose. Biddle's *Mat. Med.*, 1878: "Large doses may be taken with impunity." Homer sometimes nods; hence the necessity, more or less painful, because expensive, and from habits of association, our old book consultants must, at intervals, be replaced by the new.

People past thirty years of age should not be given large doses of chlorate of potassium (over ten grains), and it is not safe practice to give chlorate of potassium to persons known to have any kidney disease.

But for the comparative insolubility of the drug, doubtless many more deaths would be caused from its indiscriminate use.

In giving the favorite muriated tincture of iron and chlorate of potassium mixtures, the dose of the chlorate should be especially small, from the well-known property of the iron to direct it to the kidneys.

THOS. R. EVANS, M. D.

Lincoln, Va., March 14th, 1891.

Papine Hypnotic, etc.

Dr. Samuel E. Woody (Prof. Chem. and Hygiene, and Lecturer Dis. Children, Ky. School Med., Louisville), said that in an unusually severe case of acute dysentery, requiring large doses of opium, the effects of papine were so purely hypnotic and anodyne that a pound was ordered, and no other form of opium was used during the entire illness. Papine is a pharmaceutical triumph.

Proceedings of Societies, Boards, etc

MEDICAL AND SURGICAL SOCIETY OF DISTRICT OF COLUMBIA.

February 16th, 1890.—**Apioline in Amenorrhœa and Dysmenorrhœa.** (Discussion of Dr. Hill's paper, see page 15).

Dr. G. B. Harrison said he hesitated to speak on this subject in the presence of such authorities as were here to-night. He had used apiol for years, and apioline more than once, but has not had as good results as Dr. Hill, notwithstanding the testimony as to its efficacy which is accumulating, and must be respectfully considered. He had always regarded dysmenorrhœa and amenorrhœa not as diseases, but as symptoms, just as is true of dropsy and apoplexy. He thought the authorities at present considered the term dysmenorrhœa as applicable only from the recurrence of the product in the womb to the time of cessation, and appealed to Dr. Johnson to sustain him in his views. Dr. Johnson, replying, said the profession was divided on this point. Dr. Harrison, continuing, said Dr. Wylie, in cases of chlorosis and anæmia, considers amenorrhœa conservative, and in many cases, produces it. He thought we were at sea as regards the medical treatment of dysmenorrhœa and amenorrhœa, and would remain so until we had found the causes, pathology, etc., of the catamenia.

Dr. J. T. Johnson said amenorrhœa and dysmenorrhœa, were difficult subjects to put together, and he would limit his remarks to dysmenorrhœa. He fully agreed with Dr. Harrison that they were symptoms and not diseases, and with Dr. Marion Sims that dysmenorrhœa depends, in most cases, on some obstruction in the uterine canal, either at the internal or the external os. He knew of a few cases that had been cured by medicines. In some cases, he uses morphia at the menstrual period to relieve the pain. He considered the liability to the opium habit slight, when used only once a month. These pains had never been localized. They seem to spread over the entire abdomen, and the patient may toss over the floor or bed. Some cases he had relieved by Hayden's Viburnum Compound, but could not say why they were relieved. Obstruction to the flow was known to cause symptoms of dysmenorrhœa; and operative measures, removing the obstruction, was a more rational course and more permanent in its effects. He advocated the rapid dilatation of the cervix under ether, washing ou

the cavity with antiseptic solutions, and leaving in the uterus a hollow stem, which prevents flexure or contraction from returning; the stem had best be left in six days; has had better results in this line of treatment than in any other, considers the danger of fluid getting into the tubes slight. He has used apiol, but not with good results; has never used apioline, but will give it a trial. By giving the patient out-door exercise; and developing the physical strength, has seen dysmenorrhœa disappear.

Marion Sims found in all but six of a series of 100 cases some abnormal condition of the os. By some, cutting and dilating operations are supposed to cause endometritis, metritis, peritonitis, etc. Goodell used rapid dilatation in about five hundred cases without accident. Dr. Johnson has the patient remain in bed four days, and remain in her room three more days; has had no bad results. The relapses are due to contraction when no stem is used. Seven-tenths of dysmenorrhœa cases depend on obstruction, and are relieved by dilatation, antiseptics, and the hollow stem. Dr. Johnson spoke at length on the various operative procedures for the relief of dysmenorrhœa. With Dr. Bromwell, of this city, he had made experiments with electricity, using at a sitting three different size electrodes. These cases were apparently cured, but in every one the symptoms returned after two or three months. Thinks the use of electricity causes a dissolution of the obstructing elements, which return again after its use is suspended.

Dr. J. D. Morgan considers the use of apioline in anæmic and chlorotic cases beneficial, but has had bad results in plethoric cases. He gave the history of the case to which Dr. Hill had referred more in detail. He thought apioline acted by liquifying the membrane, thereby producing its good effect.

Dr. L. Eliot had used apioline in two cases, in each of which it failed to bring about the menstrual flow. In each of these cases the women were married and proved to be pregnant. He was not unprepared to have failures, as his faith in apioline was not great, having some years since used apiol very extensively, without good effect in cases of amenorrhœa. The use of apiol is not of recent date in such cases; it was used many years ago, and is now a domestic remedy among some of the North German people; they employ the fumes of the parsley leaves as they rise from burning the tops on charcoal. He thought that in amenorrhœa, if we can correct the cause, we can cure the case. The treatment of dysmenorrhœa must still remain largely surgical.

Dr. Bovee thought the treatment of these affections should be varied, as for instance, in the absence of organs no medical treatment would be of avail. After an unsuccessful course of treatment for a few months, an examination should be insisted upon, and the future treatment be guided by the results of this examination. He has used various remedies, cimicifuga, gelsemium, and others; but has little confidence in them, except in a small proportion of cases, and their uses should be gradual, as a possibility of pregnancy might exist. In the chlorotic, anæmic, plethoric, and neurotic cases, emmenagogues sometimes are of service. Has used apioline without success in two of three cases. Is opposed to the production of artificial amenorrhœa, and as most cases depend upon obstruction, thinks the surgical treatment the most satisfactory, giving preference to gradual dilatation only when rapid dilatation is refused by the patient.

Dr. Hill, in closing the discussion, said he did not overlook the operative procedures upon which Dr. Johnson had dwelt, nor did he think the treatment by medicines would in all cases obviate the necessity of a recourse to the surgical means of treatment; but he desired to call especial attention to the fact that there was great difficulty, very frequently, in obtaining even consent to an examination without considering the great fear young women have of a surgical operation, the necessity of which they do not wish to admit. He had found that binocide of manganese caused irritability of the stomach. Though the surgical treatment is undoubtedly the best, there are cases which are amenable to medical measures, and he wished to call particular attention to this mode of treatment, that practitioners will further pursue their investigations and thereby relieve many women of the great unpleasantness of an examination.

CHATTANOOGA MEDICAL SOCIETY.

March 6th, 1891.—Discussion on Hystero-Epilepsy. Paper by Dr. George R. West. See page 47.

Dr. G. A. Baxter said he remembered a conversation with Dr. Battey, in which he stated that he had seen a bloody discharge after both ovaries and uterus had been examined.

Dr. G. W. Drake thought the question of ovulation in its connection with menstruation, could not be settled—that

different men had different theories, and would continue to have them. He then gave the physiology of menstruation. He believes epilepsy may be due to reflex action from irritation of ovaries. Thinks the part which was left in the operation may act as a foreign body, and that it should be removed.

Dr. P. D. Sims was of the opinion that no part of the ovary should have been left, and that a second operation gives reasonable promise of entire relief.

Dr. J. E. Reeves said that as past experience shows so few good results from the operation, would a second operation be justifiable here? He believes in cutting through the rectus muscle, as the healing is usually very rapid, and results good.

Dr. Cooper Hultzclaw thinks the operation justifiable in nearly all cases. He has operated in two very similar cases—one is entirely cured, and the other very much benefited, and still improving. He suggested also removing both tubes. Likes the idea of going through the rectus, and will try it on first opportunity.

Dr. H. Crumley has seen a few similar cases, but found them to be improved after being properly fitted with glasses.

Dr. A. W. Boyd knew of a young lady in this city who has been suffering from hystero-epilepsy for seven years. She has been under his observation for four years. Her mind is now about gone, but at times she is rational for a few days.

Dr. R. J. Trippe considers that so far the operations have been unsatisfactory, but if done early in the trouble, thinks there will be more probability of recovery. He didn't recollect a case where good results lasted longer than five or six months.

In conclusion, Dr. West said, the only statistics he had seen was a period from 1886 to 1887, where 1,332 laparotomies had been made. Nine were for hystero-epilepsy. Results were five cured and four improved. He knew of half a dozen cases where there was improvement at first. He always removes the tubes. He had written to Dr. Battey, and he advised a second operation.

The election of officers resulted as follows:

President—Dr. J. R. Rathmell. *Vice-President*—Dr. R. J. Trippe. *Secretary*—Dr. Fred B. Stapp. *Treasurer*—Dr. Cooper Hultzclaw.

CLINICAL SOCIETY OF LOUISVILLE.

Stated Meeting January 18, 1891. Dr. Thomas P. Satterwhite,
President, in the Chair.

Extra-Uterine Pregnancy—Abdominal Section—Recovery.

Dr. L. S. McMurtry reported the case of Mrs. —, aged 27, married nine years. Eight years ago aborted at three months; had uterine disease ever since, and sterile; missed menstrual period in November; December 7th, consulted Dr. George W. Griffiths, complaining of general abdominal pain and discomfort. Again saw Dr. Griffiths on 11th. On the 13th, she had a violent paroxysm of pelvic pain on the right side. Dr. Griffiths administered morphia, and she was relieved for the time. On evening of 18th, Dr. Griffiths summoned Dr. McMurtry in consultation. Abdomen was swollen, and tender with increasing peritonitis; there was a bloody flow from the uterus; the patient was pallid as from *post-partum* hæmorrhage. Vaginal examination showed uterus pushed to left side, and pelvis choked with effusion. Pulse 134, small—the pulse of hæmorrhage. Bowels had not acted for four days. Gave an energetic purgative, and arranged for operation the following morning.

Early on the morning of the 19th, Dr. McMurtry opened the abdomen. Dr. J. W. Guest gave ether, and Dr. Griffiths assisting. On opening the peritoneum, a large quantity of blood flowed out; more than a gallon of blood-clot was removed. The foetal ball was on the right side. The right appendage was tied off close to the uterus, the cavity irrigated with warm distilled water, a glass drainage-tube placed, and the abdomen closed. When put on the table, the pulse was 140 and quite feeble. The appendage on the opposite side was not removed, as he feared to prolong the operation, which was concluded in thirty minutes.

The specimen is of great interest—containing the ovary, the ruptured Fallopian tube, and the foetal envelopes. From this poured the fearful hæmorrhage, which invariably ends in death if not arrested by surgical interference.

This is the first case of extra-uterine pregnancy, so far as he can learn, operated upon in Louisville by abdominal section at the time of rupture.

Ectopic gestation is a very common accident. Hundreds of women perish annually from this cause, because it is not recognized. Dr. Formad, the coroner's physician for Philadelphia, in one year found, *post-partum*, nineteen cases of

ruptured ectopic pregnancy unrecognized. The symptoms are those of shock, internal hæmorrhage, and peritonitis. The patients exhibit a history of sterility and peri-uterine inflammation. The fertilization of the ovum in the Fallopian tube is due to a desquamated salpingitis by which the lining of the tube is deprived of its ciliary epithelium. Extra-uterine pregnancy is almost invariably tubal. The tube ruptures about the twelfth week. It may rupture through the free surface of the periphery of the tube directly into the peritoneum, as in the specimen presented. This is a deadly accident, if the hæmorrhage is not arrested by surgical means. The rupture may occur in the portion of the tube included between the folds of the broad ligament, allowing the foetal structures to escape into the cavity of the broad ligament. These latter are the cases of extra-uterine pregnancy which go on to a viable period. Extra-uterine pregnancy until very recently was classified and treated as accidental hæmorrhage, hæmatocele, etc. It is now known that most cases of hæmatocele, so-called, are, in reality, cases of ectopic pregnancy. The treatment, in all cases, should be immediate abdominal section. The uterine appendages of both sides should be removed, inasmuch as the predisposing salpingitis is symmetrical. Dr. McM. has operated in three cases within the last two years for ruptured tubal pregnancy, and all have recovered. The diagnosis before rupture is practically impossible. When rupture occurs, the indications for surgical interference are as positive as in treating a wound of the brachial artery.

Dr. George W. Griffiths advised operation as soon as the symptoms of shock and hæmorrhage appeared. It was the most formidable operation he had ever seen. The patient is entirely healed and well, though pale from the severe loss of blood. She went to the table and ate with the family to-day for the first time, three weeks after the operation.

Dr. McMurtry remarked that operation would have been immediately done had the diagnosis been absolutely positive. That is, of course, impossible before the abdomen is opened.

Dr. J. A. Ouchterlony said this case brings vividly to mind a number of cases seen during the past thirty years, which were diagnosticated by himself and others as pelvic hæmatocele. At the same time, there was always something inadequate in the diagnosis, and it seemed incomprehensible why there should be such terrific hæmorrhage and

such profound shock. Cases formerly considered cases of hæmatocele are now known to be ruptured ectopic pregnancy, and can be successfully managed by prompt surgical interference. Lose no time in adopting the prompt course of procedure taken in the case just reported.

Dr. F. Leber said many cases of hæmatocele recover by absorption, without operative interference.

Dr. McMurtry said that when rupture occurs through the free surface of the tube it is a deadly accident from hæmorrhage, unless treated by surgical means. If the rupture, however, takes place into the folds of the broad ligament, the effusion may become absorbed, or the fœtus may develop there, forming abdominal pregnancy and going on to and beyond full term. The fœtal mass may break down and suppurate, discharging through the rectum or the bladder. In any contingency, the safest result is secured by abdominal section. There is less danger in abdominal section, according to modern methods, than by taking the risk of these several terminations.

Dr. T. P. Satterwhite said this is the first specimen of the kind he has ever seen. It is exceedingly difficult to diagnose absolutely that condition of things.

Crushed Foot—Chopart's Operation, or Amputate Above Ankle?

Dr. F. Leber was asked to see a young man who was injured (crushed foot) out West three weeks previously. The foot was in a very bad condition, and he advised amputation above the ankle-joint. This was refused, and the case was treated by another physician. He reports this case to say that in all such cases amputation should be done above the ankle-joint. In his opinion, Chopart's amputation has never been satisfactory. He recalls a case left in his care by the late Dr. Cowling, in which Chopart's amputation was done. It left a miserable pointed stump. He treated it for months with various devices, but never succeeded in getting a good stump; he was compelled finally to amputate. Experience during the war convinced him that none of these operations below the ankle gave such good results as amputating above the ankle.

Dr. J. W. Guest (by invitation) said that he had two cases of this description in the hospital. Both healed by primary union, and were discharged at the end of one month. In doing Chopart's amputation, you save the ankle-joint as a natural joint, which is better than an artificial one. At each of these operations, tenotomy was performed, to pre-

vent the stump from pointing. Experience with Chopart's amputation has confirmed that operation in his confidence. It gives a good solid base for a foot independent of any artificial foot.

Treatment of Sweating Feet.

Dr. I. N. Bloom said that in a recent case, he had the patient bathe the feet in a solution of bichloride of mercury, 1 to 1,000, morning and evening. After rubbing the surface carefully, so as to remove the dead epidermis macerated by the sweat, he directed the following course, which is partly original: A plaster sole, partly soaked in a bichloride solution, 1 to 1,000, was put in the shoe. After drying the sole and placing it in the shoe, he sprinkled it with powdered boric acid. As regards the advantage of this method of treatment, there is much diversity of opinion. In this case the result was quite satisfactory. If this treatment were uniformly successful, it would point to a micro-organismic origin for the disease rather than a neurological. His experience has been too short to determine, but in many cases, especially of the lighter forms, it is of nervous origin. It is much easier to cure simple hyperidrosis of the feet than of the hands. Hebra's method, with diachylon ointment, is the only one promising any hope of success. He has tried many other means recommended by worthy men, but always had to return to the diachylon. The inconvenience of this latter method is great, but patients bear any treatment that will help to get rid of the disagreeable disease. This is especially true of women.

Congenital Pharyngeal Fistula.

Dr. Wm. Cheatham has seen recently three cases of congenital pharyngeal fistula. They all opened on the left side of the larynx. Colored fluid, such as the methyl-violet solution, injected into the fistula passes into the pharynx; a peculiar viscid fluid, with air-bubbles, escapes when pressure is made on the tract. These cases are very difficult to heal, as the course of the fistula is so sinuous, and the healing must commence at the pharyngeal end; the best method to close them is by the galvano-cautery wire.

January 27th, 1891.—**Hypodermic Injections of Carbolic Acid, etc., for Incipient Tuberculosis.**

Dr. J. A. Ouchterlony exhibited a young man about eighteen years of age. About a year and a half ago, he began to fail in health, and was treated for three months for asthma, but continued to grow worse. Then he fell into the

hands of another physician, who treated him for awhile and did him good. Still the disease went on. Then he was under the Blair treatment for catarrh, and then he came to Dr. Ouchterlony in the middle of October last. He found him with somewhat quickened breathing and pulse, temperature slightly elevated at midday, and unmistakable evidence of consolidation and incipient softening. He had lost flesh very considerably, coughed a good deal, had night sweats occasionally, and in the afternoon his hands became hot and burning.

Mr. J. A. Flexner examined his sputum, and found it loaded with tubercle bacilli.

While abroad this summer, Dr. Ouchterlony came across an article written by Dr. O. Tostensen, in Sweden, who devotes himself to the treatment of pulmonary affections. He announces that for the last two years he had been in the habit of using subcutaneous injections in cases of tuberculosis. The formula used is the following:

R	Acidum carbolicum niveum.....	10	gram.
	Menthol.....	5	"
	Vaselinum liquidum.....	} āā	20
	Oleum olivarum steriliz.		
	Sol. bals. Peruv. 20 in petroleum benzinum..	10	"

M. S.—One-half to a five-gram syringe-ful two to three times a week.

He employed a five-gram injection; also a smaller one of one gram. When he made use of the five gram, he would make injections every other day, or twice a week; but when he used one half that size, he resorted to injections every day, or every other day. He always used the injection between the shoulders and on the sides, and always injected the fluid deep, not in the thickness of the skin, but would pinch up the skin and throw it right into the subcutaneous cellular tissue. A little pain is occasioned, and often some redness and swelling, but if the syringe is kept well-disinfected, no abscesses follow.

Dr. Ouchterlony began to use this solution, and although he has made some forty injections in this case, he has never had a single abscess. It has been painful, but the swelling would pass away and the pain still more quickly. He had gone all around the chest. Under this treatment, fever disappeared, pulse and breathing became slower, and eight pounds were gained in flesh. We have used the treatment at the University clinic, but without very marked results; because patients would not come regularly, and they were

of a class whose hygienic surroundings were exceedingly poor.

The young gentleman recently went through an attack of acute bronchitis, due to taking cold, and recovered without any difficulty as readily as if it had occurred in a person entirely free from tuberculosis. The dullness has diminished in extent and degree, and pain in the chest has disappeared. No râles can be heard at present. The only internal medication he had was arsenious acid, grain one-thirtieth, three times daily.

Dr. W. H. Wathen noticed at Johns Hopkins Hospital recently, where they were using the Koch lymph, that after each injection in a very short while the temperature ran up to 103° and 104°, showing marked general re-action from the use of it. The sphygmographic tracings showed exactly how it affected the heart's action, and demonstrated that this lymph ought not to be used on any patient except under close observation.

Dr. L. S. McMurtry thinks Dr. Ouchterlony's treatment is really a constitutional treatment for tuberculosis. The injections are introduced with a view to their being absorbed by the blood, and having an elective effect upon tubercle bacilli. It indicates that there are many lines of treatment which most probably will lead to the same objective point.

Dr. Wm. Cheatham thinks that we will have to get some substitute for the Koch treatment, on account of the unfavorable reports made of it.

Dr. F. Leber asks was the benefit derived due to the arsenious acid or the subcutaneous injections? We have all had cases where patients have improved in the incipient state from general treatment without injections of any kind. It was supposed by the bacteriologists that Koch's lymph was nothing but an extract of the natural tubercle itself, which it turned out to be.

Dr. Peter Guntermann, was at Dr. Ouchterlony's office when he made several injections, and it was remarkable that there was not a sign left where former injections had been made.

Immense Uterine Fibroid—Danger of Dividing Pedicle at One Sitting with Ecraseur Wire Illustrated.

Dr. L. S. McMurtry presented a submucous uterine fibroid tumor removed a few days since, the largest tumor of this class he had ever encountered, being quite as large as a child's head at full term. The tumor had been expelled from the uterine cavity and occupied the vagina, with se-

vere distension and pressure on adjacent organs. The pedicle was very large and was intra-uterine. The lady was thirty-eight years of age. By continuous hæmorrhage she was greatly reduced and exsanguinated. He was compelled to remove it by sections, instead of *en masse*, in order to avoid tearing the perineum. He placed the wire of a *ser-reneude* around the pedicle and cut away the tumor. Drs. Griffiths and Vance were present at the operation, and the former suggested division of the pedicle by the wire at one sitting, but he was afraid to do so. On the day after operation, in tightening the wire, it broke, and a fearful hæmorrhage resulted, and its effect was immediate upon the patient's expression. He placed her on a table, retracted the perineum with Sims' speculum, and clamped the bleeding pedicle. Within a minute's time the bed and floor were saturated with blood. It was like *post-partum* hæmorrhage. The patient made an easy recovery. He reports the case not only on account of the magnitude of the tumor, but particularly to warn against the dangers of hæmorrhage when treated as commonly directed by authors, viz., to divide the pedicle with the wire of the ecraseur at one sitting.

Dr. F. Leber has a specimen of a tumor of this kind removed several years ago, which is larger than the one just presented. He believes these tumors are expelled from the uterus when comparatively small, and grow to large size in the vagina. He does not believe that the danger from hæmorrhage is so great as the injury to the womb. Very often a segment of the uterine tissue is included in the ecraseur and injury done in that way.

Dr. J. M. Mathews said that in the last two or three weeks he has removed two *polypi from the rectum*, but the largest he has removed was about the size of a hen's egg; the other was a soft polyp about half that size. Why is it we do not have larger polyps in the rectum? The capacity is very great, and it is the same class of fibrous polyp as the uterine, but they are not often met with larger than mentioned. Hæmorrhage is the danger in polyps in the rectum, especially where the pedicle sloughs.

Uterine Polyp Expressed by Ergot.

Dr. P. Guntermann said that over a year ago he saw a woman who was bleeding every day, and had been for a year. On examination he found a little polypus about the size of a hen's egg, resting in the os; he could feel it very well. He gave her fluid extract of ergot, teaspoonful doses

two or three times a day. The first notice he had from her she sent him the polypus, which had come away of itself.

Dr. T. B. Satterwhite said that in all operations of this kind physicians should be prepared for hæmorrhage.

Polypus of Œsophagus—Apomorphia to Throw it within Reach to Apply Snare—Successful Removal, etc.

Dr. Wm. Cheatham exhibited a specimen of polypus of the œsophagus. A gentleman 79 years of age, for twelve years, had something growing in his throat. Three years ago in vomiting he ejected it and caught it in his teeth, and went to Dr. Yandell, who removed it. He came to Dr. Cheatham saying it had returned. He tried with his finger to vomit him, but failed; he then tried the horse-hair bougie, but failed to get the growth up. His neck was too stiff to introduce the œsophagoscope. Yesterday twenty-five grains of sulphate of zinc with warm water, failed to act promptly. He then gave him hypodermically apomorphia, grain one-sixth, which acted promptly, throwing the growth into the mouth, where it was caught with a vulsellum. The wire of a Jarvis' snare was passed over the vulsellum and growth, and pushed well down, so as to get as close as possible to the base of the polyp; it was cut off with but little difficulty. The polyp measured five inches in length, one inch in diameter, and was almost cylindrical. Close to where the wire cut through there was a considerable constriction. Mucous polyps of the œsophagus are very rare, but very apt to recur.

Difficulty of Excluding Septic Matter in Operations involving Peritoneum.

Dr. W. H. Wathen was consulted about a month ago by a lady who had had a large fibroid tumor of the uterus, probably for several years, but caused no serious trouble until fifteen months before. Since then she had successive hæmorrhage at each menstrual period, suffered greatly from pelvic pressure and has lost twenty-five pounds in flesh. On January 20th, hysterectomy was done, and the uterus, with a ten pound tumor, removed. The operation was completed in thirty minutes. The broad ligaments were tied off, the pedicle secured by the neude and pins, the abdomen *carefully cleansed*, and the peritoneum stitched to the pedicle or neck of the uterus. She had no shock and no untoward symptoms, until about seventy-two hours, when her pulse became rapid, and she could not retain anything in her stomach. Her pulse finally reached 150 per minute, but the

temperature was never above 100°. In a hundred and ten hours she died, apparently from septic infection; but as she had comparatively no fever, death may have been caused by intestinal obstruction from paresis of the bowels. Cases of this sort have been reported where no cultures could be made from the peritoneum or its secretions. She could not retain salines, and he gave her one grain of calomel every hour, but neither gas nor fecal matter would pass. If death was caused by septic infection, the point he wishes to especially emphasize is the difficulty of excluding septic matter in operations involving the peritoneum. This is the only case of septic poison he has had in laparotomies in eighteen months, and the surrounding conditions were never apparently more favorable, and he has never been more careful. The instruments and sponges were carefully cleansed in boiled water, and neither nurse nor himself had been exposed to septic influences.

Analyses, Selections, etc.

Advantages of Hospital Treatment Over the Care of the Sick at their own Luxurious Homes—Improved Cataract Operation—Results.

We make the following extracts from the Annual Surgical Report of the Presbyterian Eye, Ear and Throat Charity Hospital of Baltimore city for the year 1890, as prepared by Prof. Julian J. Chisolm, the Surgeon-in-Chief of the Hospital, for the purpose of showing the advantages of hospital treatment over the care of the sick at their own luxurious homes. We regard these matured views of so skillful and successful a surgeon as of great importance to the profession, as also to the chronic sick:

“It is slowly dawning upon the world that the well-regulated hospital is the very best place for the successful treatment of sick people. This applies to both the rich and poor alike. In all good hospitals provision is made for every class of society. Everything that the poor can desire, when sick, is supplied in the well-appointed hospital free ward. The ventilation is perfect. The beds are good. The food is well-selected and well-cooked. Appropriate medicines are regularly administered by trained and intelligent nurses, who watch every symptom and see that disease shall not obtain the mastery. For the sick who are accustomed

to live in luxury handsomely-furnished rooms are provided in a separate part of the building. These are either single chambers, or are communicating rooms for the accommodation of interested friends who accompany the patient. In such apartments, with the hygienic regulations which accompany them, these sick persons can be cared for as they cannot be at their homes.

"If such be the advantages for the sick, these are increased four-fold when a surgical operation is to be performed upon a member of the household. Those living in the house may be ever so anxious to aid, but if they are unaccustomed to nursing, the help which they so willingly render is very inefficient. The surroundings in luxurious dwellings are not designed for sick people; therefore surgical treatment is necessarily carried out in an unsatisfactory manner, both to the patient and to the surgeon.

"These defects are even more conspicuous when eye operations are to be performed. If the surgeon be at his ease, with the conveniences needful for good work, when he has completed the eye operation to his satisfaction, he usually considers that nine-tenths of the dangers toward a cure have been overcome. In private residences, an improvised operating chair is usually constructed out of a low lounge, a high-backed sofa, or a short table. This is very far from meeting the conveniences found in the carefully constructed operating table of a hospital. Sometimes this temporary contrivance is so low to the floor that the surgeon, who is accustomed to operate at ease when standing, must sit, or even kneel, to reach his patient—a most awkward position to do satisfactory work in.

"To perform successfully delicate operations upon so small and sensitive an organ as the eye, a good light is an essential. In properly constructed eye hospitals, large windows, with a clear outlook, supplies this requisite. How very different is this from the upholstered windows in the dwellings of the wealthy, garnished, as they are, with heavy curtains, close blinds and shades, and also screened from without, as they often are, by the heavy foliage of beautiful trees. All these, so attractive in private dwellings, obstruct the admission of light so very necessary to guide safely the surgeon's knife.

"Again, absolute cleanliness must prevail for everything that comes in contact with a wounded eye; otherwise, inflammation is apt to occur, and the eye may be lost. Cleanliness, from a surgical standpoint, does not mean only neat-

ness. An instrument may appear clean to visual scrutiny, and yet may have upon its polished blade colonies of poisonous germs only visible by powerful lenses. These vegetable microscopic germs, called microbes or bacteria, cause suppuration. They are so minute that thousands can hold to the point of an eye instrument, and yet a single one, when brought in contact with a newly-made wound in the eye, is capable of generating destructive disease. Heat destroys these germs. Hence we boil our most delicate instruments to make them aseptic or pure. Then only do we know them to be surgically clean, and not the propagators of disease. The vessels in which these instruments are boiled must be used for no other purpose. As they are in daily use in the eye hospital, they are under constant supervision. When these precautions are taken, suppuration can hardly occur, and cases progress rapidly to a cure.

"When the operation on the eye is well done, the after-treatment is simple, but none the less important. Light must be regulated so that the patient is not exposed to sudden changes. In an eye hospital, this is secured by having wide colored shades overlapping the window-frames. All windows are covered, so that a uniform soft light pervades the house. In private dwellings, shades are usually placed within the window-frames. This arrangement permits a streak of light to fall upon a sensitive eye at most inopportune times, always to its annoyance, and often to its injury. The sudden pushing open of a door by an innocent child has sent a stab of pain into a sensitive eye that does not soon pass away. Such an accident, not uncommon at the family mansion, cannot occur in an eye hospital.

"An invalid in his own home will do many things which he will not think of doing when away from home. As an inmate of an hospital, he will quietly submit to rules which have been wisely conceived for the special good of all patients, the propriety for which he will not question. Every day's experience shows that patients treated in a modern hospital have great advantages over their richer but less fortunate fellow-sufferers who are being treated for similar surgical diseases at their own luxurious homes. A larger percentage of cures, and a more speedy convalescence, are obtained by hospital treatment. Some of the new hospitals are palaces in which any one, whether he be king or subject, can be entertained with every comfort. To be treated in an hospital is now considered the evidence of a proper appreciation of what is needful in order to get rid the more

promptly of diseased conditions. The intelligent, even when wealthy and leaders in society, no longer consider it derogatory to be called hospital patients.

"Our Presbyterian Eye, Ear and Throat Hospital is, in every seuse, a new modern hospital, and it possesses every convenience that is found in the best of such institutions. The percentage of cures among those who seek relief within its walls is consequently very large. When the blind are brought to it, if the disease be curable, we expect to send them away seeing. Accidents rarely happen to those operated upon under the present hygienic conditions which pervade the entire treatment. Inflammation which, in former times, was the common disturbing element in the healing of eye-wounds, is now rarely seen. During the past year, the number of operations performed in this hospital was 1,517. These represented all classes of operations upon the eyes, ears and throats of patients, from the most simple to the most serious. The final results in these cases have been very satisfactory, and the honored name of the Presbyterian Hospital for good surgical work has been fully sustained."

This hospital does an enormous amount of work in eye surgery. From the Annual Report for 1890, 9,096 patients were admitted for treatment, of which number 6,464 were suffering with eye affections. These statistics show this to be one of the largest special hospitals in the country.

It has been brought very conspicuously before the medical profession as the exponent of a new departure in the after-treatment of cataract cases. In other eye hospitals, cataract patients are treated in bed, in dark rooms, with both eyes carefully bandaged to the exclusion of all light. Absolute quiet is also enjoined. In the Presbyterian Eye Hospital of Baltimore city, Dr. Chisolm, five years since, commenced a series of experiments which has revolutionized the entire after-treatment of cataract cases. He has successfully fought against all this excessive restraining treatment. He no longer confines his patient to bed, and he only closes up with a piece of translucent isinglass plaster the eye operated upon, leaving the other eye open for the comfort of the patient. With these privileges they can walk about, can dress themselves, can see friends, and can feed themselves. He has found that leaving one eye open, exposed to the moderate light of a shaded window, does away with that over-sensitiveness always found when both eyes are shut up and all light excluded. To say nothing of

the great comfort enjoyed by cataract patients under the new order of treatment, convalescence is so much advanced that his patients are ready to be discharged from further care at the end of two weeks, with eyes so strong that seldom do they require the protection of smoked glasses when they go out into the street. Last year, 178 cases of cataract were operated upon. Since the opening of the Presbyterian Eye Hospital, now 13 years, 4,048 cases of cataract have applied for treatment, and of these 1,238 were found ripe for operation, and have been operated upon. For the past five years he has treated his cataract cases in light rooms, with one eye open, and without the usual restraints practiced by others. Under this non-restraining treatment, the final results have been most satisfactory. Good sight he expects to restore to persons blind with cataract. Under the approved method of operation and after-treatment, the percentage of lost eyes is infinitesimally small. The operation for cataract extraction in the hands of a skillful surgeon has become one of the most successful of all surgical procedures. Dr. Chisolm has operated over 2,000 times for cataract. It is his familiarity with this operation that has brought the Presbyterian Eye, Ear and Throat Hospital of Baltimore city so prominently into notice.

Cocaine in Urethral Surgery.

In December, 1886, Dr. W. Frank Glenn, of Nashville, Tenn., introduced a bulbous bougie in a patient on whom he had cut a stricture three inches from the meatus; also enlarged the meatus. He prepared a fresh 8 per cent. solution of muriate of cocaine, and injected a small quantity (without measuring) into the urethra. Ten seconds had nearly passed when patient excitedly asked, "Will that put a man asleep?" Dr. Glenn answered, No; that its effects were only local. By this time the patient was unconscious, muscles jerking, eyes rolling upward, mouth frothing, and every few seconds entirely ceasing to breathe. He was thoroughly and completely poisoned by the cocaine. It required the active work of three other physicians and himself one hour and fifteen minutes to prevent death. At last, however, he began to breathe naturally, and soon returned to consciousness without any ill effects whatever resulting therefrom. He there resolved to use cocaine (of any strength) no more on a recently cut or denuded urethra. He has since had no unpleasant results until September 24th, 1890. Seeing that Glück regarded a mixture of cocaine in a weak

phenol solution as entirely void of any danger, he again tried it in a urethra which had been incised at the meatus just forty-eight hours previous.

The solution was prepared after Glück's formula with the exception that instead of adding ten grains of cocaine to the drachm, he only put two and one-half grains. He took a small quantity in a syringe and injected into the urethra, not holding it in, but allowing it to escape immediately. He turned to his instrument case, and immediately the patient raised up and asked, "What is this?" and fell back, going at once into the regular cocaine spasms, from which, for twenty or thirty minutes, Dr. Glenn feared he would lose his life. The symptoms were exactly those of his former patient, though not lasting so long.

These two experiences, with one other, in which the effects were well marked, but not alarming, will cause him to be very careful in the use of cocaine on absorptive surfaces. In the mildest case of the three, the urethra had not been incised at any point, but was ulcerated, and bled upon the slightest touch with an instrument.

From these cases, he draws the following conclusions:

1. Cocaine is a most potent and wonderful local anodyne, but not void of danger.
2. Its use should be positively forbidden in the recently cut or denuded urethra.
3. Prepared after the manner of Glück (with phenol), it is equally unsafe to apply to the abraded urethra.
4. The use of cocaine in the urethra is attended with more risk than when applied to any other part of the body.—*South. Pract.*, April, 1891.

Tongaline in Scarlet Fever.

Dr. I. N. Love, of St. Louis, has had remarkable success with tongaline as a stimulator of the glandular system. The kidneys and glands of the alimentary canal respond favorably to its use in doses of one-half to a teaspoonful every three hours. He is in the habit of using the following formula:

R.—Tongaline (Mellier).

Syr. tolu..... āā f 3j.

Elix. lactopeptin..... f 3ij. M.

Sig.—Dessertspoonful every two to four hours, p. r. n.

Tonga is indicated in scarlet fever, and the salicylic acid and the small amount of pilocarpine in the compound are also of great value.—*Annals Gynæco. and Pædiatry*.

Resume of the Shurley-Gibb Method of Treating Phthisis.

When Drs. Shurley and Gibb reported the great benefit their patients, suffering from phthisis, had received from subcutaneous injections of solutions of chloride of gold and soda and of iodine with inhalations of chlorine gas, Dr. O. Prescott Bennett, of Chicago, Ill., decided to try their method on some of his own patients. He commenced by giving hypodermic injections of the solution of iodine, equal to $\frac{1}{20}$ of a grain, which was gradually increased to $\frac{1}{6}$ of a grain. These injections were given daily for a week or ten days, except when symptoms of iodism, disturbances of the alimentary canal, or loss of strength, were manifested, when he changed to the chloride of gold and soda solution, which was always gradually increased from $\frac{1}{24}$ to $\frac{1}{8}$ of a grain. These solutions should be chemically pure, and thus avoid abscess. During the next ten days he aimed to alternate the injections of iodine with those of the chloride of gold and soda, but varied from this rule as each case appeared to indicate. From this on, he continued giving the injections, every second, third or fourth day, according to the advancement of the case, preferably using the iodine unless it was contra-indicated. The injections cause less pain and discomfort when injected in the lower gluteal region than when given in any other part of the body.

The inhalations were given in the following manner: A Davidson spray tube, No. 66, is filled with a mixture containing one-half drachm of chlorine water, U. S. P., to the ounce of 6 per cent. solution of chloride of sodium, which renders the chlorine less irritating. The rubber tip of this spray tube is put in a hole in the side of a large bottle, capable of holding two or three quarts, upon the mouth of which is fitted a rubber face cap, such as is used by dentists for their nitrous oxide inhalers. The bottle is placed in a box, which is suspended from the ceiling, and can be raised or lowered to suit the height of each patient. The spray tube is connected with the compressed air of about thirty pounds pressure, which forces the liquid in the tube as a spray against the side of the bottle, and breaks it into a fine vapor. The patient is directed to apply rubber face cap over mouth and nose, and inhale the vapor, which is formed in the bottle. The inhalation is continued ten or fifteen minutes at each sitting, and given every day. The amount of chlorine water to the ounce can be increased unless it should prove too irritating to the patient.

After having watched carefully for about twelve weeks

the treatment of between forty and fifty cases by this method, he now believes it to be of great benefit in a certain number of cases of phthisis, while in some it proves of no benefit whatever, and in others, if continued, he is afraid it only hastens their death. But he has failed to see a single case of *incipient* phthisis so far which has not been benefitted by this mode of treatment.

He believes that certain other diseases of the lungs and bronchial tubes besides phthisis will be greatly benefitted by this mode of treatment, especially the injection of iodine.

He does not claim it to be of benefit in all cases of phthisis, but that when associated with proper medicinal and hygienic treatment, it will be able to save many of those who are now constantly suffering from this dreaded disease.—*Weekly Med. Rev.*, April 4th, 1891.

Cantharidate of Potassium in Tuberculosis.

Prof. Liebreich, of Berlin, has introduced the cantharidate of potassium as a remedy for tuberculosis, and judging from certain results obtained by Heymann and others, it appears that it does possess some power. Heymann has treated twenty-seven cases of laryngeal and pulmonary tuberculosis with this agent, and with results said to be fully better than with tuberculin or any other mode of treatment. After the third or fourth injection, the general state was found to be improved. In the laryngeal cases, the pain and hoarseness rapidly diminished. The laryngoscope showed first a diminution in the redness, and in three or four cases, the ulcers eventually healed completely. In the pulmonary cases, there was in the great majority a marked change for the better in both local conditions and general symptoms.

Fraenkel has treated fifteen cases of tuberculosis with the cantharidate of potassium. He gives the details of a case of extensive tuberculous ulceration of the larynx with œdema of the surrounding parts, and accompanied by severe pain on swallowing. After a few injections, the pain and swelling disappeared. In all the cases treated, the action of the cantharidate salt was marked.

Fraenkel considers that it acts by direct action on the tubercle bacilli, while Landgraf suggests that it is partly owing to the action of the cantharidin in increasing serous exudation and mechanically washing away the detritus.

The dose of potassium salt recommended is very small,

being from 0.0001 to 0.0004 of a gramme; 0.0002 being a medium dose, or about the 1-300th of a grain.

The cantharidate salt is directed to be made as follows: 0.2 g. of cantharidate and 0.4 g. of potassium hydrate are placed in a vessel of the capacity of 1,000 c. cm. and containing 20 c. cm. of water. The vessel is heated in a water-bath until the solution becomes clear, and then cold water is added to make 1,000 c. cm.

As cantharadin is not a chemically pure body, it is not possible to exactly estimate its dose. A sodium cantharidate solution may be made in the same way as the potassium solution: 0.3 g. of the sodium hydrate are, however, sufficient to make a clear solution, with 0.2 g. of cantharidin.

The recent unhappy experiences of surgeons and physicians in connection with tuberculin will make them very cautious in accepting any premature statements regarding the cantharidates or any of the other agents recently recommended for tuberculosis. If there is any virtue in the cantharidates, it will not be long before it is known.
—*Montreal Med. Jour.*, April, 1891.

Sterility of Pus in Abscesses of the Liver.

An unfortunate accident which, however, was unattended with any bad consequences, happened to a surgeon a short time ago, who was operating for the relief of a large hepatic abscess, about which there were no adhesions. The surgeon, M. Peyrot, had just withdrawn about two litres of pus from the abscess, and was proceeding to wash the cavity out when the hepatic incision disappeared from the field of operation, and it was only after much difficulty, and the expenditure of twenty minutes in manœuvring that it was again discovered. A certain quantity of pus had evidently escaped into the peritoneal cavity; nothing, however, followed this accident. No untoward symptoms occurred, and the patient made an excellent recovery. In order to explain the fact of the harmlessness of the pus, it is essential to recollect that Saveran and Neltee have shown that pus obtained from abscesses of the liver consecutive to dysentery is usually sterile.—*Med. Press & Cir.*, March 11.

McArthur's Syrup

Is mixed, like the painter's colors, with brains. See the excellent reasoning in their advertisement on white cardboard page after reading matter, and delay not adopting the remedy in your practice.

Book Notices.

Text-Book of the Diseases of the Ear. By JOSEPH GRUBER, M. D., Professor of Otology in the Imperial Royal University of Vienna, etc. Translated from the Second German Edition by Special Permission of the Author, and Edited by EDWARD LAW, M. D., C. M., Edin., M. R. C. S., Eng., Surgeon to London Throat Hospital for Diseases of the Throat, Nose and Ear, and by COLEMAN JEWELL, M. B., Lond., M. R. C. S., Eng., Late Physician and Pathologist to London Throat Hospital, etc. With 150 Illustrations and 70 Colored Figures on two Lithographic Plates. New York: D Appleton & Co. 1890. Royal 8vo. Pp. 580. Cloth. Price, \$5. (For sale by West, Johnston & Co., Richmond.)

The reputation of Prof. Gruber in his specialty would alone make this work on the Ear welcome to all who are interested in this department of medicine, but the book has substantial merit of its own that commends it to every one. The Introductory part on the Anatomy of the Ear is as complete as it could well be, and the Plates are exceptionally well executed, far beyond those usually seen in text-books. The colored Plates are especially valuable, as they form a perfect and complete Atlas of the normal and pathological appearances of the drum-head. In the General Part about 70 pages are devoted to the modes of examination, and the subject is very complete; but, in speaking of "Posterior Rhinoscopy," he makes no mention of the self-retaining palate retractors so valuable in this method of obtaining information, as only about 55 per cent. of cases can be satisfactorily examined without it (p. 161). Whilst Prof. Gruber has made an elaborate and valuable survey of the diagnosis and treatment of diseases of the external, middle and internal ear, covering 375 pages, he has entirely ignored the importance of nasal troubles in the causation and continuance of middle-ear diseases, except in so far as these latter are influenced by the presence of adenoid growths in the post-nasal space. Every modern otologist, every rhinologist, has daily experience of the fact that middle-ear diseases are caused by nasal obstructions of all kinds, and are frequently cured by restoring the symmetry of the nasal chambers. This oversight mars the book to some extent, but it does not detract from its other excellencies. Its general make-up, the paper, printing, and illustrations, are of the best; and the amount of information it contains, the accumulated experience of a life-long devotion to this spe-

cial subject, make it a valuable addition to the library of every physician, whether specialist or general practitioner.

The International Medical Annual and Practitioner's Index for 1891. Edited by P. W. WILLIAMS, M. D., Secretary of Staff. Assisted by a Corps of 38 Collaborators—European and American—Specialists in their Several Departments. 580 octavo pages. Illustrated. \$2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The ninth yearly issue of this valuable one volume reference work, richly deserves and perpetuates the enviable reputation which its predecessors have made, for selection of material, accuracy of statement and great usefulness. The corps of department editors surpass that of last year. Its numerous illustrations—many in colors—make the "Annual" more than ever welcome, as providing, at a reasonable outlay, the handsomest and best résumé of Medical Progress yet offered. Part I, comprises new remedies, with a review of the therapeutic progress of the year. Part II, specially considers deformities of the hand, and their diagnostic value in nerve lesions, and the character of the sputum as an aid to diagnosis. Part III—the major portion of the book—is given up to new treatment; and is a retrospect of the year's work, with numerous original articles by eminent authorities. Part IV, is made up of miscellaneous articles, such as recent improvements in sanitation; climatology and hygiene; alcoholic inebriety, and the results of asylum treatment; improvements in pharmacy; books of the year, etc. The arrangement of the work is alphabetical, and with its complete Index, makes it a reference book of rare worth. In short, the "Annual" is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world.

Cyclopædia of the Diseases of Children—Medical and Surgical. Edited by JOHN M. KEATING, M. D. Illustrated. Large 8vo. Vol. III, Pp. 1128. Vol. IV, Pp. 1371. Published 1890. Philadelphia: J. B. Lippincott Co. Cloth. Price \$5 a Volume.

Volumes I and II of this almost indispensable *Cyclopædia*, were noticed in our February issue. If we succeeded then in impressing readers with our own estimate of the incalculable value to every practitioner of those volumes, we wish to restate a like favorable estimate of the two volumes now before us. *Volume III*, is divided into four Parts—each Part treating respectively of the diseases of the digestive

system; of the genito-urinary organs, and of the blood and blood-making organs; of the surgery of children; and of the diseases of the osseous system and of the joints. *Vol. IV*, is likewise divided into four Parts—treating respectively of the ear; of the eye; hygiene; and diseases of the nervous system.

We have not space in which to call attention to the many points of excellence of the volumes which form this cyclopædia of diseases of children. But we may say in general terms that the several authors selected for the respective subjects discussed, are those very ones whose consultation advice any practitioner would be most likely to prefer in cases of disease or injury, could he but avail himself of their services. The work is in every respect well edited and well issued, and is cheap, for it will form an almost lifetime essential cyclopædia for study and reference. Copious and well arranged indices are appended to each volume.

Essentials of Surgery, together with a Full Description of the Handkerchief and Roller Bandage. By EDWARD MARTIN, A. M., M. D.; Instructor in Operative Surgery, University of Pennsylvania, etc. Illustrated. Fourth Edition. Revised and Enlarged by an Appendix, containing *Full Directions and Prescriptions for the Preparation of the Various Materials Used in Antiseptic Surgery. Also Several Hundred Receipts Covering the Medical Treatment of Surgical Affections.* Philadelphia: W. B. Saunders. 1891. 12mo. Pp. 334. Cloth. Price, \$1.00. (From Publisher.)

We give so full a title of this No. 2 of "Saunders' Question Compends" because it is descriptive of the work, and shows wherein a great improvement has been made over former editions. Like all others of the Compend Series, this book is arranged in the form of questions and answers—insuring terseness of description, yet without omitting points of practical importance. These "Saunders' Question Compends" merit our most hearty recommendation for use both by the practitioner and student.

Plain Talks on Electricity and Batteries, with Therapeutic Index. By HORATIO R. BIGELOW, M. D., Fellow of the American Electro-Therapeutic Association, etc. Philadelphia: P. Blakiston, Son & Co. 1891. 12mo. Pp. 85. (From Publishers.)

The object of the able author is to give a plain, practical presentation of a difficult subject; and quite successful has been the effort. This little brochure is valuable to every doctor—especially to him who is just beginning the use of

electricity; and it is useful also as a memorandum guide for him who is more familiar with electricity. The Therapeutic Index appended, compiled mostly from that given by Tripier, is exceedingly serviceable. Every practitioner who even dabbles in electrical studies should have this work.

Wood's Medical and Surgical Monographs. Vol. 9, No. 3, March, 1891. Published monthly. \$10 a year. Single copy, \$1. Wm. Wood & Co., Publishers. New York.

The contents of this March number are articles by Dr. J. M. Purser, of Dublin, on "The Modern Diagnosis of Diseases of the Stomach;" Mr. J. W. Hume Williams, of London, on "Unsoundness of Mind in its Legal and Medical Considerations;" Dr. Tom Robinson, of London, on "Baldness and Grayness; their Etiology, Pathology and Treatment." The title page, index to Vol. 9, etc., are added.

Special Report on Diseases of the Horse. Prepared under the Direction of Dr. D. E. SALMON, Chief of Bureau of Animal Industry. Published by Authority of the Secretary of Agriculture. Washington. 1890. Svo. Pp. 556. Complimentary Copy from J. H. Rush, Secretary of Agriculture, etc.

The United States Department of Agriculture is deserving of universal praise for having undertaken to issue each year a practical report on the diseases of the domestic animals, giving full points about diagnosis and treatment, so that the intelligent farmer, if he cannot procure a veterinarian, may proceed with the treatment himself. The work above is on diseases of the horse. In the list of over a dozen eminent veterinarians selected as authors for the different articles which have been compiled, we feel a something of sectional or local pride in the fact that the distinguished veterinarian of this city, Dr. Wm. H. Harbaugh, was chosen as the author of the very important article on "Diseases of the Respiratory Organs." It is an excellent article—well-prepared in its technology, and of the utmost benefit to the educated practical man on any farm. We regret that we have not the space to speak more fully of the report; but as it may be obtained by the asking of the Department for a copy, we need not say more than to say it is a book of great practical value to doctor and to farmer.

We are forced to omit several book-notices until the May issue.

Editorial.

American Medical Association.

The forty-second annual session will be held in Washington, D. C., May 5, 6, 7, and 8, commencing on Tuesday at 11 A. M. Delegates receive their appointments from permanently organized State Medical Societies, County and District Medical Societies, recognized by representation in their respective State Societies, and from the Medical Departments of the Army and Navy, and the Marine-Hospital Service of the United States. The number of delegates for any particular State, county, or town, shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association.

Members by Application, shall consist of such members of the State, County, and District Medical Societies entitled to representation in this Association as shall make application in writing to the Treasurer, and accompany said application with a certificate of good standing, signed by the President and Secretary of the Society of which they are members, and the amount of the annual membership fee, five dollars. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

At the session of 1888, it was resolved that in future each delegate or permanent member shall, when he registers, also record the name of the Section, if any, that he will attend, and in which he will cast his vote for Section officers. Secretaries of Medical Societies, as above designated, are earnestly requested to forward, at once, lists of their delegates.

Committee on Arrangements.—Dr. D. C. Patterson, Chairman, 919 I street, N. W., Washington, D. C. Dr. William B. Atkinson, of Philadelphia, *Permanent Secretary*.

In connection with the above, the President of the Medical Society of Virginia, Dr. Wm. W. Parker, of Richmond, Va., requests us to ask that every Fellow of the said Society who intends going to the session of the American Medical Association should at once notify him by letter in order that certificates may be issued in due form.

A New Medical College in North Carolina.

At a meeting of a number of prominent physicians of

North Carolina, held at Durham, in that State, upon March 18th, to consider the question of establishing a medical college in connection with Trinity College, the preliminary arrangements were perfected leading to the organization of a school of high standard, thorough equipment, and three years' course. So says *Medical Record*, April 4th, 1891.

New Medical Law of Alabama.

The *Alabama Medical and Surgical Age*, February, 1891, says that the "Penalty Bill," which recently passed the Legislature, gives Alabama a model medical law, and places the State Medical Association on a safe and sound basis. The penalty bill, as it passed the Legislature, provides that any person practicing medicine or surgery in that State, without having first obtained a certificate of qualification from one of the authorized Boards of Medical Examiners of the State, shall be guilty of a misdemeanor, and on conviction thereof, shall be fined not less than twenty-five dollars nor more than one hundred. Provided, that this act shall not apply to any doctor practicing medicine in Alabama who is a graduate of a reputable medical college, and who has complied with the law by having his diploma recorded by the Judge of Probate in the county in which he is practicing.

Beds for Incurables at the Retreat for the Sick.

At a recent meeting of the Board of Lady Managers of the Retreat for the Sick of this city, it was decided to make a move towards the endowment of six cots for incurables. Thirty-five hundred dollars is the amount needed to endow each cot. A young girl is now waiting the completion of one endowment, and a small sum has already been contributed, through sympathy for her. It is hoped that some readers may be instrumental in securing contributions to aid the ladies in carrying out their purpose.

The Post-Graduate Clinical Charts,

Designed for use in hospitals and private practice and arranged and published by Drs. William C. Bailey and J. H. Linsley, of New York city, supplies an often felt need for the sick room. The Charts are used in the form of pamphlet books, with printed lines and diagrammatic drawings in light tinted ink, so that the doctor or nurse may dot any point he pleases with pencil or pen. Each book keeps the record of one case eight weeks. If required, the book can

be taken apart and new leaves inserted. The price is 20 cents each book ; \$2 per dozen, or \$15 per 100 copies. Address Dr. Linsley, 226 east Twentieth street, New York, N. Y., for further information.

Help Wanted on a Report on Puerperal Eclampsia.

Dr. J. T. Graham, of Wytheville, Va., has undertaken the preparation of a Report on Eclampsia, intended for the Lynchburg Session of the Medical Society of Virginia next October. *Virginia practitioners* are especially requested to forward him (without further formality) the probable number of obstetrical cases they have attended, the number of cases (if any or none) of eclampsia seen, whether primi- or multiparæ, albumen or no albumen before or until convulsions set in ; state whether convulsions came on before, during, or after labor ; how many died ; how many recovered ; treatment adopted, etc., etc. We earnestly urge all interested to contribute their experiences and observations in as condensed form as practicable before July, 1891, in order that he may prepare the Report on Eclampsia for which he is so well qualified.

Summer School of Medicine, University of Virginia.

We are glad to see that several of the teachers and professors of the Medical Department of the University of Virginia have organized, for the coming summer, a private school of medicine, intended as preparatory instruction for those who propose to begin the study of medicine, and for those who are seeking proficiency, especially in the essential ground-work studies of anatomy, histology, chemistry, and physiology. The special eminence of the professors named in the advertisement of this Summer School is an assertion in itself of the thoroughness of the course of instruction proposed. We most cordially recommend this private preparatory school of medicine.

Medical Society of Virginia.

The Twenty-Second Annual Session will be held in the city of Lynchburg, Va., beginning Tuesday night, October 6th, 1891. This definite selection of day has been made by the Executive Committee of the Society, after due consultation with the profession of Lynchburg, through the Chairman of the Local Committee of Arrangements, Dr. C. E. Busey.

Dr. J. A. Goggans,

Surgeon of the S. and W. Division, C. R. R. of Georgia, of Alexander City, Ala., will sail April 16th on the steamer "Columbia," from New York, for England, and will spend some months abroad in the chief medical centres of England, France and Germany.

Dr. T. James Taylor,

Of Walthall's Store, Brunswick county, Va., was elected by the Executive Committee of the Medical Society of Virginia, March 25th, to fill the vacancy on the Medical Examining Board of Virginia, for the unexpired term, through December, 1892, occasioned by the resignation of Dr. W. J. Harris; of Blackstone, Va. It is an excellent selection.

American Academy of Medicine.

The Sixteenth Annual Meeting will be held at Washington, D. C., May 2nd and 4th, opening at 3 P. M., May 2nd. As it will be just previous to the session of the American Medical Association, members will be able to attend both meetings. Charles McGuire, A. M., M. D., of Gaston, Pa., is Secretary.

Air-Cushion Truss-Pad of Proved Reliability.

As we are going to press, we have received a special one-page advertisement from The Hastings Truss Company, of Philadelphia, claiming proved reliability of an air-cushion truss-pad. Such an invention commends itself on mention. See advertising page 9.

The Mississippi Valley Medical Association

Will hold its Seventeenth Annual Session at St. Louis, on October 14, 15, and 16, 1891. A large attendance, a valuable programme, and a good time, are expected. Members of the medical profession are invited to attend. Dr. C. H. Hughes, St. Louis, President; Dr. E. S. McKee, 57 W. Seventh street, Cincinnati, Secretary; Dr. I. N. Love, 301 N. Grand Avenue, St. Louis, Chairman Committee of Arrangements.

The Congress of American Physicians and Surgeons

Will be held in Washington from 3 to 6 P. M., September 12d, 23d, 24th and 25th, 1891. William Pepper, Chairman of the Executive Committee.

The Death of Rev. Dr. John E. Edwards—

Father of the Editor of this journal—in Lynchburg, Va., on March 31st, compelling our absence from this city before all of the "copy" was prepared for the printers, will serve, we are sure, as explanation for the few days' delay in the issue of this April number.

Obituary Record.**Dr. Caleb Toxey,**

Professor of Anatomy in the Medical College of Alabama, in Mobile, was stricken by paralysis just as he had finished a lecture in the college during the morning of March 10th, and died at 1:30 A. M., March 11th, age 52 years. He was born in Tuscaloosa county, Ala., received his academic course from a Georgia college, and graduated in medicine from the University of Pennsylvania in 1860. He then moved to Mobile, and associated himself in practice with his brother, the late Dr. William Toxey. He met with generous encouragement by the venerable Dr. J. C. Nott, and other eminent physicians of that period. He entered the Confederate service as Assistant Surgeon of the 23rd Alabama Regiment, and rapidly rose to the distinction of General Deas' Brigade Surgeon. After the war, he resumed practice in Mobile with his brother, who died 1870. Then he became the partner of Dr. Geo. A. Ketchum, which association lasted until death came to break it thus suddenly. About 1880, Dr. Toxey was chosen Assistant Demonstrator of Anatomy in the Medical College of Alabama, and was subsequently elected Professor. In this position, according to common testimony, he displayed a wealth of information and a clearness of description that soon distinguished him as one of the finest lecturers on anatomy in the South. He was a member of the City Council, and was alive to every interest of Mobile. He leaves a widow (who was Miss Parmley) and six children—the eldest being about 20 years of age. His brother, Dr. Elliott Toxey, also lives in Mobile. The funeral services of the Presbyterian Church were conducted by the pastor, Rev. Dr. Budgett, and then his remains were borne to Magnolia Cemetery. Among the floral tributes of special design, was an empty chair sent by the students of the Medical College.

The death of Dr. Toxey, so unexpectedly while in the

fullness of manhood, has cast a gloom over this entire community, indicative of universal love and esteem of all who knew him. None of our citizens wielded a stronger influence over the people. In all that relates to the cause of medicine and humanity in our midst, he was ever active and foremost. A good man, an able and conscientious physician, a distinguished teacher, and one whose talents contributed greatly to the progress of medical science in this section passed away when the summons called Dr. Toxey from time to eternity. May the memories of his life and character lead many to emulate his noble, distinguishing virtues.

ANGELO FESTORAZZI, M. D.

Aristol Bougies.

Aristol is regarded by many as quite as efficient as iodoform in its antiseptic action, and it possesses the special advantage of being entirely free from odor. The aristol bougies, announced by Messrs. Parke, Davis & Co., should find a wide application in the antiseptic treatment of the urethra. Aristol is a substitute product of thymol obtained by mixing a solution of iodine in iodide of potassium with an alkaline thymol solution.

Campho-Phenique—Its General Utility.

Dr. J. Edwin Michael, of Baltimore, Professor Clinical Surgery University of Maryland, says: "I have convinced myself that campho-phenique is a very valuable remedy, and always keep a supply of it in my office. I use it constantly and with great satisfaction, as an antiseptic stimulating application to ulcers, venereal and other, and for the treatment of abrasions, bruises and cuts. I have had severe lacerated wounds heal up by the first intention under its beneficent influence. It is also very valuable in varying proportions, as an ointment, especially where itching is to be combated."

"*Ponca Compound* exercises a decidedly alterative action upon the uterine tissues, as also a general tonic influence upon the pelvic organs. It tends to absorb plastic deposits, regulate vascular supply, relieve congestion, tone up the nerve forces, and remove spasmodic conditions. It will not always obviate the necessity for mechanical procedures, but in most instances it removes the principal influences that cause and keep up engorgements, displacements, etc.

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Original Communications.

ART. I.—Syphilis and Prostitution.*

By GEORGE M. KOBER, A. M., M. D., Washington, D. C.

The cause of syphilis has not been definitely determined, although there is much reason for believing that it is due to the bacillus of Lurtgarten, who discovered this organism in all syphilitic affections and in all stages of the disease, and never found it in non-syphilitic organs. The proof that this bacillus is really the cause of syphilis is rendered difficult by the fact that animals are not susceptible to the inoculation of syphilitic virus, and it is, moreover, difficult to distinguish this microbe from other bacilli.

The virus of syphilis adheres to the tissues and secretions of syphilitic ulcers, and is evidently also contained in the blood and the secretions of the breast as soon as it has passed beyond the stage of a purely local affection.

The transmission of the virus most frequently takes place in sexual intercourse, but it may also be conveyed in kissing, upon eating and drinking utensils, in nursing excoriated lips, in circumcision, in vaccination, through the

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 17, 1890.

milk of syphilitic mothers, the sperma of syphilitic fathers, or the maternal blood.

The susceptibility to the virus differs in different individuals. This may be due to the existence or non-existence of abrasions, and perhaps to a greater amount of resistance on the part of the tissue-cells and fluids of the body to the syphilitic germ. One attack of syphilis does not offer immunity from a subsequent attack, and second attacks are not usually characterized by milder manifestations.

Prophylaxis.—The measures which have been proposed for the prevention of syphilis are numerous enough, but not so easy of practical application. Parkes makes a strong plea in favor of continence, and believes that the sexual passion, though very strong, can be accelerated or delayed, excited or lowered, and hopes, by the cultivation of pure thought and conversation, removal of temptation, constant and agreeable mental and physical employment, and finally temperance, that continence may not only become possible, but easy.

The same author also favors early marriages as the salvation of the working youth of any country, and believes that the best thing a young man can do is, as early as possible, to make his home, and to secure himself, both from the temptations and expenses of bachelorhood.

Since the above most excellent measures can only be attained by a higher cultivation and moral training of the male youth in all its grades, we must pass to the consideration of what may be done now towards the prevention of the disease.

In the way of individual prophylaxis, something may be accomplished by temperance, moderation, and cleanliness; and the latter may be supplemented by the instant ablution and injection with a solution of corrosive sublimate—1.1000 after connection. "It may seem an offence against morality to speak of such things, but we must deal with things as they are, and our object now is not to enforce morality, but to prevent disease." (Parkes.)

Contact of every description with syphilitic persons should of course be avoided.

But, after all, one of the surest means of preventing the disease is to detect and cure the disease in prostitutes. This involves, that they shall be registered, placed under the supervision of the police, and subjected to sanitary inspections. If found to be infected with syphilis, they should be placed in special hospitals provided for their treatment, and the same measures should be applied to women suspected of clandestine prostitution and found affected with the disease.

A German lawyer, in a paper on the relations of the State to prostitution, suggests that all men who know themselves to be affected with a venereal disease and fail to have the same treated, or neglect to be treated because they are ignorant of the contagious character of the disease, shall be punished by law. Whilst the first portion of this proposition appears just and reasonable, the second clause is too radical; since not every man can be expected to know the contagious character of venereal diseases.

In the Section of Hygiene at the recent International Congress, an interesting and important debate took place regarding the matter of licensing houses of prostitution. Dr. Thiry; of Brussels, earnestly advocated the licensing system, with sanitary inspection twice a week. Dr. Kaposi, of Vienna, took similar grounds. The views advanced were opposed by several others, and Dr. Drysdale, of London asserted that there was as much syphilis in Paris, where prostitution is regulated, as in London, where it is not.

A vote of the Section was finally taken, and it was shown that a great majority of the members were opposed to regulation.

The *New York Medical Record*, in commenting upon the above, considers this action in accordance with justice, common sense and experience, as licensing and sanitary inspection tend to produce secret prostitution; and besides, such methods enforce penalties upon women, but not upon men, and are therefore most unjust.

There is no doubt that clandestine prostitution furnishes the largest number of syphilitic cases. In Strassburg, between 1879 and 1884, 3,601 suspected prostitutes were examined, and 67 per cent. were found to be affected; whilst in 46,800 inspections of registered prostitutes, only 785 cases occurred during the same period, and they were of a mild type, requiring only half the number of days for treatment.

In Metz, 21.2 per cent. of the secret prostitutes were found to be diseased; and, in Berlin, of 159 "suspected" waiter girls, not less than 95, or 35 per cent., were found to be syphilitic.

Mauriac reports that of 5,008 syphilitic soldiers 4,012, or 80 per cent., contracted the disease from secret prostitutes, 733 from registered prostitutes, and 263 from other women.

Indeed, there seems to be no remedy against the evils of secret prostitution other than strict supervision of the police, proper education, and the encouragement of all classes, to report their misfortune and seek prompt treatment. We fail to see the injustice of a law which would compel men and women to be treated for a contagious disease, or which would subject prostitutes to sanitary inspections, and not the men. A woman chooses to follow a dangerous trade, as dangerous as if she stood at a corner of a street, exploding gun-powder. By practicing this trade she ought at once to bring herself under the law, and the State must take what precautions it can to prevent her doing mischief. The State cannot prevent prostitution, but it is no more interference with the liberty of the subject to prevent her propagating syphilis than it would be to prevent her propagating small-pox, and the man who knowingly and willingly spreads the disease should be punished and held responsible for the damage inflicted.

The beneficial effects of rigid sanitary inspections have been shown by the collective statistics of the Medical Society of Rostock, in which city the control of prostitutes began in 1883.

The number of cases of syphilis treated in that city amounted in—

1881	1882	1883	1884	1885	1886	1887
240	269	164	112	92	92	70

The medical statistics of the garrison at Strassburg show that the percentage of syphilis—

In 1850, was	12.8
In 1868, was	13.3
In 1875, was	4.9
In 1880, was	2.7
In 1884, was	2.4

And the sudden decrease of venereal diseases coincides with the introduction of a strict control of prostitution. Similar good results have followed the “contagious diseases act” of England, by which the prostitutes of certain military and naval stations are brought under supervision.

Parkes adduces the statistics to show that in the eight years the State was saved very nearly 10,000 cases of syphilis; and, supposing that each demanded only twenty days of treatment, 200,000 days of sickness have been saved in eight years.

According to the *Lancet*, the percentage of syphilitic soldiers after the establishment of this control fell—

At Davenport, from	7.6 to 5.8
At Portsmouth, from.	11.6 to 4.1
At Woolwich, from.	8.8 to 5.8
At Colchester, from.....	18.2 to 5.5

In 1885, the percentage of syphilitic soldiers at the “un-subjected stations”—*i. e.*, at the places where the prostitutes are not under police supervision, was still 13.6, whilst, at the “subjected stations,” it was only 7.4. In 1865, 76 per cent. of the prostitutes examined at the “subjected stations” were found to be syphilitic; in 1868, only 39 per cent., and since 1870, only from 8 to 6 per cent.

All of this shows that something has been accomplished by these so-called unjust laws. In the meantime, let us at least contribute our share towards the prevention of this dreadful disease, and its serious and far-reaching consequences.

ART. II.—Surgical Treatment of Appendicitis.*

By RANDOLPH WINSLOW, M. A., M. D., of Baltimore, Md.

PROFESSOR OF SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF BALTIMORE, ETC.

In approaching this subject from a surgical standpoint, great difficulty is experienced from the confusion in the nomenclature applied to the inflammatory troubles in the right iliac fossa. This confusion in nomenclature means an equal obscurity in our ideas of the pathology of these affections.

The terms typhlitis, perityphlitis, and paratyphlitis, are used more or less indiscriminately for painful inflammatory affections of the right flank, which may be widely different in character.

Typhlitis is an inflammation of the cæcum, which may be limited to its mucous coats, or may penetrate more deeply, until the peritoneal coat is reached, when the resulting peritonitis, with its accompanying exudation, is called *perityphlitis*; and if pus forms, a *perityphlitic abscess* is said to be present.

It was supposed until quite recently that the cæcum was only partially covered by peritoneum, leaving a large part of its walls with no peritoneal coat, and in immediate relation with the post-cæcal connective tissue. This is an error; the cæcum has a distinct mesentery in the vast majority of cases, and floats quite freely within the peritoneal cavity. And when an abscess forms, it is almost invariably found to have its primary seat within the peritoneal sac—the diffusion of the pus being prevented by adherent coils of intestines. Sometimes, as a secondary result, the peritoneum is destroyed and the pus escapes into the post-peritoneal connective tissues. It would be much better to use the terms cæcitis and appendicitis to describe inflammations of the cæcum and vermiform appendix, and to discard such expressions as typhlitis, perityphlitis, and paratyphlitis, as being obscure and obsolete. *Cæcitis* or *typhlitis* is a disease

* Read before the Clinical Society of Maryland, February 20, 1891.

amenable to medical measures, and but seldom calling for surgical treatment, whilst *para-* and *perityphlitis*, meaning thereby an inflammation of the post-cæcal connective tissue, but seldom occurs.

As the various inflammatory conditions within the female pelvis are usually found to depend upon disease of the Fallopian tubes, so the inflammations found in the right iliac fossa usually have their origin in diseased conditions of the vermiform process. It is very important, therefore, that we should have correct ideas about this very troublesome and apparently useless bit of anatomy.

The *vermiform appendix* varies in size, length, and position; sometimes it has quite a distinct mesentery, but generally it is quite free, and may be found occupying almost any relation to the cæcum. Its tip may be found in the pelvis or turned upwards and attached to the abdominal wall or some of the viscera, or the whole process may be found behind the cæcum, or in fact occupying almost any relation to this gut.

It is probable that the appendix is frequently diseased without producing very decided or distinct symptoms, and that recoveries occur both with and without treatment.

When, however, *acute appendicitis* sets in, the symptoms are generally quite characteristic; but it is not every case of acute appendicitis that demands operative treatment. When the symptoms are not very severe, the pain not intense, and the fever not high, and especially if no tumor is to be felt, reliance should be placed upon medical treatment; a careful watch should, nevertheless, be kept for evidences of the development of more threatening symptoms. Even where there is a swelling found in the right iliac fossa, it does not necessarily demand operation. I have seen a number of cases recover after a decided exudation had occurred, without operation or any appreciable discharge of pus.

It has been recommended, and in many cases carried out, to aspirate the suspected region. Whilst this method has yielded good results, I am unable to approve its employment, as it is excessively hard to properly disinfect an aspi-

rating needle, and a serous accumulation may become converted into a purulent one, besides the risk of penetrating the intestines or some blood vessel. When the diagnosis must depend upon the detection of fluid within a circumscribed space, it will be less dangerous to make an incision down to the seat of disease, than to aspirate.

When a decided lump is found in the right iliac fossa, which is hard, tender, and painful, and the fever keeps up, and especially if this lump increases in size, an incision should be made both for purposes of exploration and treatment. This incision should not be too long delayed, as the pus may break through the adhesions which circumscribe it, and set up a general suppurative peritonitis. It is not safe to wait until the sign of fluctuation can be detected, as this may never occur, or may occur only at a late period. The earlier the operation is performed the greater the probabilities of a successful termination. It may be stated that operations, when indicated at all, ought to be made as early as the fifth or even the third day.

When the symptoms of perforation come on, as sudden and intense pain with collapse, operation ought to be performed as soon as there is sufficient re-action to justify it; otherwise, a generalized peritonitis will probably set in and terminate fatally. There are a few cases of perforative appendicitis, which present such obscure symptoms, that the nature of the disease is not suspected until a fulminant peritonitis is set up, with pus-bathed intestines and viscera, when it is too late to save the patient by laparotomy.

I wish again to emphasize the fact that the exudation, or pus, in a case of suppurative appendicitis, is found within the peritoneal cavity, and not in the post-peritoneal connective tissues; hence, the great danger that the adherent coils of intestines may become separated, and fatal general peritonitis occur.

Having determined to operate, the seat of incision is usually over the swelling, as thereby the most ready access to the abscess cavity is gained. The tissues are divided by a straight or curved incision in the right flank until the trans-

versalis fascia is reached, when an aspirating needle or hypodermic needle may be thrust in various directions into the swelling, if there is any doubt about the presence of pus, or the tissues may be cautiously divided until the peritoneal cavity is opened, when the exudation of pus or serum will be reached. If the appendix is perforated, or even if it is manifestly diseased, it should be ligated close to the cæcum and cut off. Sometimes the appendix will not be found—it has sloughed off and disappeared. It is usually better not to irrigate the abscess cavity, as there is danger that by so doing pus may be forced into the general peritoneal cavity. Free drainage should be secured, and as far as practicable, antiseptic treatment adopted; but this will be difficult, as the discharge is of an especially septic character.

As surgeons, we are also called upon to open the abdomen in those cases where the pus has set up a general peritonitis, though with but slight hope of success. Here the incision should be placed in the linea alba, with perhaps incision for drainage at one or more other points. The peritoneal cavity should be thoroughly cleansed, the intestines sponged off or washed, and free, and if possible, continuous irrigation with warm water, or a weak antiseptic solution kept up—several drainage tubes being placed in favorable situations. One or two cases have been recorded of recovery after continuous irrigation for several days.

A certain quite large number of cases of appendicitis recur after having apparently healed, and not only give rise to considerable local reaction, but even to danger.

Treves, of London, and Senn, of Milwaukee, recommend the removal of a diseased appendix during the intervals of quietude from acute outbreak, and report several successful operations in such cases. I am strongly inclined to the opinion that this is correct surgical doctrine, notwithstanding the protest of Dr. Dennis, of New York against it; and I will certainly carry it out in practice in appropriate cases. I have a patient who has had two attacks of painful febrile affections on the right side of the abdomen, the first of

which was recovered from under medical treatment, and the last, after incision, who is determined to have the more radical operation performed if he has another recurrence.

In order to bring this subject more directly to the consideration of this Society, I have the honor to submit the following propositions:

1st. Inflammatory affections in the right iliac fossa are almost invariably due to diseased conditions of the appendix vermiformis.

2nd. When an abscess forms in the course of such affections, the pus is found, primarily, within the peritoneal cavity, and not in the post-cæcal connective tissue.

3rd. Many mild, and some severe attacks of appendicitis are recovered from without operation.

4th. When there is severe localized pain, tenderness, and a tumor present in the right iliac region, with the constitutional suppurative inflammation, an early operation is demanded to evacuate the pus. This should be done as early as the third day when possible.

5th. Delay is more dangerous than operation, as the adhesions circumscribing the pus may give way, and a rapidly fatal peritonitis may be set up.

1 *Mount Royal Terrace.*

ART. III.—The Hand Spray in the Treatment of Fevers.

By JUNIUS F. LYNCH, M. D., of Sanford, Fla.

In the treatment of typhoid and malarial fevers, and in all conditions of hyper-pyrexia, where the heart's action is too feeble to permit the administration of antipyrin or phenacetine or antifebrine, and where an immediate reduction the temperature is necessary, I have, for the past fifteen months, employed the hand-spray.

I use an apparatus that throws a continuous spray, and a solution composed of one drachm of aromatic spirits of ammonia, one drachm of table salt to a pint of warm water.

The patient is stripped, and is sprayed from head to foot. The upper portion of the body is first sprayed; and while an assistant, with a towel, is drying this, the lower extremities are subjected to the same treatment.

After the patient has been thoroughly dried, he is covered with a blanket, and soon falls into a calm, refreshing sleep, followed by perspiration, a reduction of the temperature, and a stronger and slower pulse. The relief thus obtained is of course only temporary, but it is just so much gained; and in the treatment of febrile conditions, experience has taught me that "every little is a help."

The advantages of this method over the wet-pack and sponge-bath are obvious. It is easier to handle; it is not necessary to disturb the patient; it is more elegant, more refreshing, and equally as effective.

I have recently used this in the treatment of a young Englishman who came here from Demerara suffering with "jungle fever," and I never failed to reduce the temperature two or three degrees. But it is in treatment of typhoid and continued fevers, where the patient's life frequently depends upon an immediate reduction of the temperature, that this method has been found particularly useful.

ART. IV.—Broncho-Pneumonia in Children.*

By C. F. NEWBILL, M. D., of Norfolk, Va.

In selecting this subject for consideration to-night, I have been influenced to do so simply because of the frequent occurrence of broncho-pneumonia in children, its usual fatal termination, and because of the hope of gathering something from the discussion which may follow the reading of this paper which may prove helpful in preventing, or else in combatting this dreaded disease in the future.

Pneumonia in children has been variously designated—catarrhal pneumonia, capillary bronchitis, broncho-pneu-

* Read before the Norfolk Medical Society during its April, 1891, meeting.

monia, lung fever, etc. Broncho-pneumonia seems to be preferred by recent authorities, since it tells something of the anatomical lesions—lesions that always involve the bronchi and the parenchyma of the lungs. The catarrhal process is a form of disease peculiar to mucous membrane, and may be appropriately applied to lesions of the trachea and large bronchi; but as no mucous membrane, with mucous glands, exist in the pulmonary vesicles, the term catarrhal pneumonia would not be applicable to the disease in question, although, in truth, broncho-pneumonia may never arise unless preceded by a catarrhal bronchitis. In fact, it many times arises through an extension of the inflammation of the bronchial mucous membrane to the air vesicles. Cappillary bronchitis would be expressive of only a part of the trouble. It is held that the smaller bronchi may be inflamed without the inflammation invading the alveoli. I think this is rarely, if ever, met with practically.

The anatomico-pathological lesions of pneumonia in children are very different from those revealed by autopsies in the adult. In children, the pneumonic inflammation does not involve entire lobes, as it does in older persons, but is confined to small spots which vary in size and with normal pulmonary tissue intervening—hence the term “lobular pneumonia.”

Broncho-pneumonia is the form of inflammation most common in the extremes of life. It may be occasionally met with in the young adult, frequently in the aged, and is most common in infancy and childhood up to five years of age. It occurs most frequently as a sequel of measles, scarlet fever, whooping cough, or diphtheria.

The discussion of this subject may be greatly simplified by reflecting upon the peculiar anatomy of the lungs of the child; and the great variance of the clinical features and pathological anatomy of pneumonia in children and adults may be accounted for by this anatomical difference.

In the fœtus, the bronchi provide most of the air space. The extreme bronchial ramifications have, at their terminal extremities, small dilatations—rudimentary air

spaces. Between these dilatations, and making up the remaining bulk of the lungs, is loose, delicate, connective tissue, into which these dilatations are destined to push their way, enlarging and subdividing, until finally, in adult life, they occupy all the available space among the branches, the loose, connective tissue becoming thin, dense bands, constituting the stroma. In the early life, the alveolar walls are thick, containing loosely their blood vessels, and it is not until the fourth or fifth year that this development assumes the ripe proportion between the bronchi and alveoli, and the stroma becomes dense and binding, restraining the capillaries, as in adult life. The blood-vessels being loosely restrained, their walls become easily distended, and encroach upon the cavity of the alveoli, which, being small, with thick walls and abundantly distributed with vessels, we can see how, in hypostasis, distension of the vessels may become factors in displacing the air in enfeebled subjects with weakened respiratory vigor and partially obstructed bronchi. The main difference between the lungs in childhood and in adult life consists in the proportionately greater extent of the bronchial tubes than that of the air spaces, the greater abundance of connective tissue stroma, and its tendency to cellular proliferation. The submucous connective tissue of the bronchi is loose, and is more abundantly supplied with nuclei, and their vessels are loosely held.

Pneumonia in children is invariably associated with bronchitis. The inflammation advances from the larger to the smaller bronchi until the capillary bronchi are reached and the inflammatory action is communicated to the air-passages and alveoli. This invasion may vary in the rapidity of its advancement from an almost simultaneous attack to a gradual development occupying days. The advancement may be more rapid along certain bronchi, and so involve irregularly and successively different portions of different lobes of the lungs, or it may invade extensive portions simulating lobar pneumonia. Whatever the time occupied in its course, whatever the post-mortem appearances, the essential lesions are bronchitis and pneumonitis or

broncho-pneumonia. Time will not allow me to dwell on atelectasis and emphysema, that are frequent accompaniments of pneumonia.

Etiology.—The causes may be divided into predisposing and exciting. Among the predisposing causes, none is more important than age. Under five years, pneumonia is invariably of this type, whether it occurs primarily or develops as a complication of measles, scarlet fever, whooping cough or diphtheria. As a complication and developing secondarily, it may occur later than the fifth year. It is less common before the sixth month, which may be attributed to the greater care of infants and their comparative immunity from these diseases, that favor the development of bronchitis.

Dentition, rapid growth, enfeebled constitution, debility from previous disease, tuberculosis, chronic diarrhœa, malnutrition, certain seasons, cold moist atmosphere with great variations of temperature, impure air, insufficient food, and the exanthematic diseases, are *predisposing causes*.

Among the *exciting causes*, I place, first, the bad habit of permitting infants to lie in wet garments, and allowing enfeebled children to remain for hours on their backs. Mechanical, chemical, and septic irritants, foreign bodies gaining entrance into the lungs, irritating dust, air inspired over diphtheritic and gangrenous tracts, serve as exciting causes.

Under this head arises the unsolved problem of specific germ infection, which I shall not attempt to discuss further than to say that I cannot conceive of pneumonia as being an inherent part of measles, diphtheria or whooping cough. By some process of physiological evolution, these diseases seem to render the system vulnerable at certain points, and transform the bronchial and pulmonary epithelium into fertile soil.

Symptoms.—It is difficult to draw a comprehensive picture of broncho-pneumonia, since it is rarely primary, but supervenes upon catarrhal bronchitis. Possibly there is no other disease in which the symptoms are so varied and irregular,

and admit so little of practical classification. The symptoms of pneumonia in children are not so positive and diagnostic as they are in adults. The initial chill, the intense pain, and the pathognomonic sputa, are wanting. As broncho-pneumonia is always preceded by bronchial catarrh, it is seldom possible to determine accurately its commencement.

The transition may be gradual. Râles develop early, and may be coarse or mucous, sibilant or fine, subcrepitant or crepitant. They will be modified by the portion of the bronchial tree affected, the congestion and the consistence of secretions in the tubes. At first, the sonorous râles will be heard, but as the inflammation advances and invades the smaller tubes, still further narrowing their calibre by congestion and infiltration, the viscid mucus occasions sibilant râles both on inspiration and expiration, which may disappear upon coughing.

Crepitant râles indicate inflammation of the air-cells. They are fine, dry sounds, like that produced by rubbing hair between the fingers, and is heard most distinctly upon deep inspiration. The crepitant râles are not so commonly met with in children as they are in adults. The coarse râles are generally believed to be produced in the trachea and large bronchi; the sibilant, in the smallest bronchi, or those whose spaces have been diminished by congestion and infiltration, and are due to the vibration of the viscid secretion in the tubes. Coughing may displace the mucus accumulations, and thus cause the râles to disappear. On the other hand, the crepitant râles are thought to be due to the sudden and forcible expansion of the air-cells, and perhaps the terminal bronchi glued together by pathological secretions.

Physical signs are not always characteristic. To percuss and auscultate the chest of children are often very difficult. Many children become frightened, and set up a howl that will render the most patient attempts futile.

The most striking and pronounced symptom is the accelerated breathing, which may be sixty or eighty per minute, with an inverted rhythm. In health the accent lies on in-

spiration, but in pneumonia, if the respiratory sound is audible, it will fall on expiration, which becomes louder. With each respiratory act, the intercostal spaces sink, producing a momentary depression beneath the nipples, extending towards the sternum, and the facial muscles are called into play; the alæ nasi will be seen to rise—a phenomenon upon which Vogel says too great stress cannot be laid. The kind and manner of cough, and the character of breathing, furnish the most important data for the recognition of broncho-pneumonia.

If a bronchial cough that has lasted several days without fever grows worse, and temperature becomes decidedly elevated, suspicion may be aroused that pneumonia has developed. A fact established by Zeimssen, and of great diagnostic value, is that the temperature always rises upon the supervention of pneumonia upon a bronchial catarrh. In simple bronchitis, the temperature rarely exceeds 102° , but if pneumonia develops, it rises in a few hours to 105° , or more. The pulse increases in frequency, the face becomes redder, and great restlessness is evinced.

I have had under observation recently a case of broncho-pneumonia, in a child four months old, that developed as just described. For some days there was cough, attended with little or no fever. The cough grew worse and painful. When I was called, I found the rapid and characteristic breathing, and a temperature of 105° . Crepitant râles could be distinctly heard at the base of the lungs.

Diagnosis.—For differential diagnosis we have to consider previous health, predisposing diseases, the commencement of the attack with bronchitis and absence of crisis. It may be difficult to distinguish it from disseminated milliary tuberculosis.

Prognosis in broncho-pneumonia is always grave. The younger the patient, the greater the fatality. It is most grave, as a complication of whooping cough, measles, and diphtheria.

Age is of the most important consideration. Zeimssen lost half of his pneumonia patients under one year of age,

two-fifths of those between two and three years, and one-fourth after the third year. Rachitis, tuberculosis, dyspnœa setting in early, rapid and feeble pulse, and stupor, are unfavorable symptoms.

Treatment of broncho-pneumonia must be symptomatic. Careful nursing is of the greatest importance. The child should occupy a large room, well-lighted and ventilated by windows, but no draught should be allowed on the patient. The child should not lie in wet garments, or remain on its back for hours. The position should be changed often. The temperature of the apartment must be uniform, and moist. Older patients express gratification and relief when allowed to breathe air impregnated with steam. Dry air allows the mucus sooner to become thick and tenacious. Attention to the comfort of the little sufferer often lulls it to rest and to sleep. Bathing the skin, when hot and dry, with alcohol, or rubbing with oil, is soothing and refreshing. Nourishing and supporting the patient is of paramount importance. As an artificial food, milk is the best. The quantity must be regulated according to age. It should be given often, and in small quantities. The directions for its administration should be as peremptory and explicit as they are for the giving of medicine.

The urgent and alarming symptoms will require special treatment as they arise. Labored dyspnœa and impending suffocation from bronchi, narrowed by swollen mucous membrane and tenacious secretion, demand emetics, Ipecac is the most efficient of this class of remedies, as it increases the flow of mucus by its nauseating effect, and tends to remove it by inducing vomiting. Its administration is followed by little depression. The dose may be from two to fifteen grains, according to age, etc.

Warm baths, and the abstraction of blood, have been recommended for the relief of dyspnœa. The propriety of the latter I doubt very much. The painful cough, so harassing and disturbing, should be controlled by opium. The camphorated tincture, or the compound powder of opium, in doses appropriate to age, may be given. — Bromidia and

Hoffman's anodyne are often useful to quiet restlessness. The chest should be enveloped in hot flaxseed poultice or a hop jacket, over which an oil silk should be put to retain the heat, prevent chilling of the skin by evaporation, and keep the clothing dry. Small doses of calomel are often beneficial. High temperature may become a dangerous symptom, and should be controlled by some of the antifebrile remedies.

In treating two cases of broncho-pneumonia lately, I was much pleased with acetanalide, in doses of one grain, repeated every two or three hours. The temperature was promptly reduced, the skin became moist, and the patient quieted. During convalescence tonics should be given.

Clinical Reports.

Laparotomy for Twisting of the Descending Colon—A Case.*

By J. WESLEY BOVEE, Washington, D. C.

H. B., colored; born in Maryland twenty-five years ago; was admitted to Washington Asylum Hospital March 2nd, 1891. He gave a history of rheumatism, having recently recovered from an attack lasting six weeks. There was a copper-colored eruption covering the entire body—most marked over the chest, abdomen, and front of thighs; an indefinite history of initial sore on penis, and a scar of a bubo in right groin. He complained of severe pains all through the abdomen.

There had been some nausea and vomiting, and no movement of the bowels since February 26 (four days), at which time a slight one had occurred. He did not worry about this, however, as he had often had no passage from the bowel for ten days, but he desired relief from the pain which interfered with sleep.

He objected to a cathartic, as he had taken three compound cathartic pills February 27th; and as they failed to move the bowel, he argued that nothing was there to come

* Read before the Medical Society of the District of Columbia, April 8th, 1891.

away. However, on the day of his admission the resident physician, Dr. John E. Walsh, gave him a few thirty-grain doses of potassium bicarbonate, and next day, before my visit, one drop of croton oil, which failed to act. I ordered large enemata of warm soapsuds and a large mustard plaster to abdomen.

March 4th. None of the enemata were retained. Patient is vomiting a greenish-yellow fluid, with an odor strong, but not faecal. There is marked tympanitic distension; intense pain; legs drawn up; a hard, wiry pulse, and temperature of 102.4° Fah. Realizing the desperate condition of the patient, I attempted to pass a rectal tube and failed. I then requested the patient to submit to an exploratory laparotomy. This he declined to do, stating he would be all right by the next day, and would go home. I ordered the croton oil to be repeated, and the following to be used as an enema:

R.—Spts. Terebinth $\bar{5}j$.
 Treacle..... $\bar{5}ss$.
 Ol. Ricini..... $\bar{5}jj$.
 Sol. Saponis..... ad Oiv.—M.

This was used at 2, 4 and 6 P. M., and as no passage had occurred, and the man was worse, I ordered ten grains of calomel to be taken at once, and antikamnia for pain.

March 5th.—Temperature, 99° ; pulse, 108; patient slept considerably last night, and really seems better, but has had no movement from bowel; repeated calomel without effect. That evening he still refused to be operated upon, and was given another ten-grain dose of calomel and $\bar{5}ss$. tinct. hyoscyamus every three hours. Temperature 99° , pulse 120.

March 6th.—Temperature, 100° ; pulse, 130 and weak; patient growing worse. Later this evening patient concluded he would die if let alone, and clamored for an operation, which next morning, under careful antisepsis, was done. When the abdominal wall was cut through, the intestines attempted to rush through the opening, but a large flat sponge quickly applied against them controlled this action. The opening was enlarged to four inches, and the hand introduced. The peritonitis was found to be severe; a few adhesions were broken down, and a volvulus in the colon near the sigmoid flexure was found. As this was straightened out, the gas rushed along the bowel.

The wound was closed by twenty silk sutures and the usual dressing over it.

At 3:30 P. M., temperature has risen to 103° , and pulse is 150. Stimulants and external heat freely applied. Three ounces milk of assafœtida given by enema every two hours, and at 3 A. M. next morning there was an extremely copious movement of the bowel, which had a wonderfully repulsive odor, and which carried with it a vast amount of gas. After this the temperature fell to 99° and his pulse to 108. He felt much better, but had great pain.

March 8th, 6 A. M.—Antikamnia, five grains. 12 M.—A drachm each of gruel and hot milk were relished, and patient seems much improved. 5 P. M.—Had two large movements from the bowels in rapid succession. Immediately after this, he went into collapse and could not be rallied. At 8:30 P. M., another passage from the bowel occurred, and fifteen minutes later death ensued.

The history of this case is presented for the consideration of the Society to-night, that it may serve as evidence of the advisability of an early operation whenever laparotomy has to be done for intestinal obstruction. I wish to state, I advised laparotomy in this case as soon as I was sure of the diagnosis and of the inefficiency of other treatment, three days before it was done and before peritonitis had existed so extensively. During the three days that supervened between the patient's first refusal and his consent to the operation, the treatment was a forlorn hope, and the peritonitis became violent.

At last, when the operation was done, it was to satisfy a dying man, and of course, to save his life if possible. I had almost no hope of saving him, yet he was sure to die if the operation was not done, and I could not refuse to operate when it offered the slightest hope of prolonging his life. Had I thought he would have consented to an operation, I would not have given him such large doses of calomel and croton oil. Had the patient been endowed with more intelligence, he would have undoubtedly have seen the wisdom of a laparotomy at the proper time, and now be living.

Brinton says, volvulus is the cause of 87 per cent. of cases of intestinal occlusion. (Dujardin-Beaumetz, *Dis. of Stomach and Intestines*, page 307.) Other authorities give a smaller proportionate number. Many cases can be relieved

by means other than laparotomy, and these remedies should be vigorously tried. But they should not be employed over an extended time, as laparotomy, should it be found necessary, promises success only in early cases, before peritonitis sets in and the patient is exhausted. The mortality in such cases should not be as high as in cases of removal of pustules.

Ashhurst found that of 230 cases of laparotomy for intestinal obstruction collected by him, fourteen were for volvulus, of which number but four recovered. This table shows a mortality rate of 71 per cent., which is undoubtedly due to the lateness of the operation. I am satisfied that in the next fourteen cases the mortality rate will be much lower. The four large passages from the bowels after the operation, and the entire absence of any movement previous to it, is sufficient evidence of the relief afforded by such operation. I feel confident that had the patient accepted my advice and allowed the operation three days sooner, his life would have been saved.

916 Fifteenth Street, N. W.

Correspondence.

Albuminuria Caused by Antipyrine.

Dear Dr. Edwards,—I wish to call your attention to a case of albuminuria caused by antipyrine.

A gentleman from New York came to Dr. Wm. A. Hammond's Sanitarium for Diseases of the Nervous System with locomotor ataxia. His urine was so heavily loaded with albumin that it almost solidified on boiling. There was so much œdema of the lower extremities that he could hardly put on his shoes; and there was also considerable puffiness under the lower eye-lids. I found that he had been taking for some time, nearly every night, large doses of antipyrine—often as much as sixty grains a night. This would al-

ways stop the atoxic pains. I examined his urine twice a day, and found much albumin in the morning, and very little or none in the evening discharge. It was then, on questioning, I found out about the antipyrine. It was suspected that the antipyrine caused it, on account of there being no albumin in the evening. The antipyrine was stopped, and since then, the albumin has disappeared, and the oedema is much less.

Yours truly, E. L. TOMPKINS, M. D.

Washington, D. C., April 7th, 1891.

Observations on "Koch's Lymph."

By JOSEPH JONES, M. D., of New Orleans, La.

NEW ORLEANS, LA., April 28, 1891.

His Excellency, BENJAMIN HARRISON,
President United States of America, Washington, D. C.

Sir,—I have the honor to acknowledge the following:

EXECUTIVE MANSION, Washington, Jan. 19, 1891.

Professor JOSEPH JONES,
Charity Hospital, New Orleans, La.

My Dear Sir,—At the President's direction, I beg to send you by express to-day one vial of Koch's lymph for such use as you may deem wise to make of it.

It was forwarded to the President by the American Minister in Germany.

Very truly yours,
E. W. HALFORD, Private Secretary.

I beg leave respectfully to submit to your Excellency the following brief report on this "Vial of Koch's Lymph:"

The small vial of "Koch's lymph," containing about five grammes (*about seventy-six drops*) of a dark brownish red liquid, accompanied by directions for its use, signed by Dr. A. Libbertz, of Berlin, was delivered to me in person at my office, 36 University Place, by the express agent.

Holding that your Excellency designed this humane bequest, not for private ends, but for the benefit of suffering

humanity and the promotion of scientific inquiry, I placed a portion of "Koch's lymph," contained in the small vial, at the disposal of the Medical and Surgical Staff of the Charity Hospital of Louisiana, as will be seen from the following correspondence:

36 UNIVERSITY PLACE, New Orleans, La.,
January 22, 1891.

Professor A. B. MILES, M. D.,
Resident Surgeon Charity Hospital, New Orleans, La.

My Dear Doctor,—On the 22d inst., I received by express a small vial of "Koch's lymph," together with the enclosed communication from the Private Secretary of his Excellency President Harrison. * * *

I respectfully tender to the Surgeon-in-Charge of the Charity Hospital, and through him to the Medical and Surgical Staff, a portion of the "lymph," for the treatment of the patients in the wards of the Charity Hospital, provided that I be furnished with accurate reports of each and every case thus treated.

Respectfully your obedient servant,
JOSEPH JONES, M. D.,
Visiting Physician Charity Hospital.

CHARITY HOSPITAL, State of Louisiana, New Orleans,
January 26, 1891.

Professor JOSEPH JONES, M. D.,
Visiting Physician Charity Hospital,

My Dear Doctor,—I beg to acknowledge receipt of your favor of the 22d inst., tendering to the Surgeon-in-Charge of the Charity Hospital, and through him to the Medical and Surgical Staff, a portion of the lymph which you have received from President Harrison.

Accept my thanks for your courtesy in this matter. I will inform the members of the Medical and Surgical Staff of your kind offer, and refer to you those who desire to experiment with the lymph in their ward service.

Very truly yours,
A. B. MILES, House Surgeon.

We extract the following from the official proceedings of the Board of Administrators of the Charity Hospital, April, 1891:

"Dr. Miles reported relative to "Koch's lymph," in which he said the world was taking interest. Dr. Joseph Jones

had received a vial, and tendered it to the Hospital. He had placed a notice on the Bulletin Board, inviting others to use it in safe bounds, if they thought proper. No one had applied to use it. For himself, he did not care to use it yet, as he did not deem the "lymph," or its substance, sufficiently understood. It may yet be used in the Hospital, but it would be best to await further results from it."

Assisted by my Chiefs of Clinic, Drs. Stanhope Jones and J. M. Elliott, I examined the cases in the wards under my care in the Charity Hospital daily up to the middle of March, with a view to the use of "Koch's lymph" in the diagnosis and treatment of phthisis pulmonalis and other forms of tubercular disease.

That this agent or drug was not used in the treatment of diseases under my care in the wards of the Charity Hospital of New Orleans was due to the following causes:

(a) No case presented itself which I deemed suited to the application of "Koch's Treatment," without danger to the welfare of the patient.

(b) No case presented itself of which the diagnosis was so obscure as to require the institution of a doubtful experiment.

(c) Without exception, the patients under my treatment and care in the wards of the Charity Hospital declined to submit to this mode of treatment.

(d) The extensive prevalence of influenza in a severe and often fatal form, and which attacked, with special violence, those suffering with phthisis pulmonalis, rendered the injection of an irritating agent into the living human body hazardous.

In accordance with what I conceived to be the humane and charitable intention of your Excellency, I have held the small bottle of "Koch's lymph" sacred to charitable and scientific investigations.

I have received a number of applications from doctors and private individuals for the use of this "Koch's lymph" in private practice, and in institutions other than the Charity Hospital of Louisiana, and I have uniformly refused such applications.

Such applications appear to have been based upon a misapprehension of the intention of your Excellency, and upon ignorance of the therapeutic value and power of a quantity of liquid too small to supply more than one drop or a half to each one of the fifty-two wards of the Charity Hospital,

with an average number of 550 patient, and an annual number of about 7,000 cases of all diseases.

OUTLINE OF RESULTS OF CHEMICAL AND MICROSCOPICAL EXAMINATION OF THE CONTENTS OF VIAL OF KOCH'S LYMPH.

The objectives employed in the following observations ranged from $\frac{1}{5}$ to $\frac{1}{15}$ of an inch. These precautions were taken to secure such results as were possible in the chemical and microscopical manipulation of the small amount of material.

PROPERTIES OF KOCH'S LYMPH.

1. Reddish brown liquid, with oily movement and consistence of thin glycerine.

2. Clear, with a few flocculi.

3. Musty odor, like that of stale beef extract.

4. When burned in flame of alcohol lamp, emits an odor like burning beef extract.

5. Reaction strongly alkaline.

6. When a drop of the undiluted extract was placed in the eye of a living animal, it appeared to cause a disagreeable sensation, attended with closing of the lids temporarily, but it induced no permanent irritation or inflammation. A repetition of this experiment caused no perceptible injury to the eye or animal.

7. No appreciable effects were induced by the "lymph," when administered internally, by the mouth, to living animals.

The fluid, in its innocuous effects, when applied to living mucous membranes, differed from the poison alkaloids, and from hydrocyanic acid and the cyanogen compounds.

8. Mingles rapidly and freely in all proportions with distilled water.

9. When injected with varying degrees of dilution with distilled water (50 per cent., 25 per cent., 10 per cent., 1 per cent., or 0.1 per cent.) into the subcutaneous tissues of living animals (cats, rabbits, and guinea pigs), only slight local irritation and no sloughing were induced at the points of injection. The injections were followed by fever of greater or less duration. The animals appeared to regain their normal conditions in varying periods of four to seven days, but were reserved for future observation. The liquid appeared to be far inferior in immediate effects, when injected subcutaneously to prussic acid, strychnine, and serpent

poison; neither were its manifest effects identical with septic poison.

10. Uncoagulated by heat.

11. Uncoagulated by nitric acid.

12. Uncoagulated by heat and nitric acid.

13. Chemically pure absolute alcohol threw down from the "lymph" a flocculent, whitish deposit.

14. Solution of nitrate of silver threw down a heavy, white deposit, showing the presence of chlorides in considerable amount.

15. Soluble barium salts gave slight precipitates.

16. Stannous salts gave no evidence of the salts of gold.

17. Microscopic examination of the undiluted "Koch's lymph," with objectives varying from $\frac{1}{8}$ to $\frac{1}{15}$ of an inch, revealed the presence of minute ovoid and rod-shaped bodies, resembling the *spores* and *bacilli* of the "*bacillus tuberculosis*," as described by the eminent microscopist, Professor Robert Koch.

These organisms, in their size and structure, and behavior with staining agents, corresponded with the "*bacillus tuberculosis*."

18. When the lymph was diluted with boiled distilled water, and preserved in chemically clean test-tubes, the mouths of which were carefully guarded by anti-septic cotton wool, the fluid became turbid. Microscopic examinations revealed the fact that the turbidity was due to the multiplication of organisms presenting physical and chemical properties similar to those of the "*bacillus tuberculosis*."

19. The addition of a drop of the "lymph" to "Pasteur's sterilized liquid" was followed by the development of the spores and slender, rod-shaped organisms resembling the "*bacillus tuberculosis*."

20. The spores and bacilli of "Koch's lymph" were cultivated, with the necessary precautions to exclude all external germs from the atmosphere and external objects, upon various substances or media, as serum, blood, boiled potato, coagulated white of egg, and boiled aseptic crystallized sugar.

21. The cultivations in fresh blood were strongly alkaline; those of potato, white of egg, and crystallized sugar were acid.

22. When a small quantity of the "lymph" was added to a carefully sterilized solution of crystallizable sugar, the clear solution became turbid from the development of ba-

cilli, and emitted a sweetish odor, similar to that which I have often observed to be exhaled by patients suffering from phthisis pulmonalis in the advanced stages.

CONCLUSIONS.—(a) The active principles of "Koch's lymph" appear to reside in a colloid nitrogenized compound, coagulable by absolute alcohol, and in living germs—micro-organisms—spores and bacilli, similar to those of the bacillus tuberculosis, and capable of multiplying within and without the living organism.

(b) The potent effects of "Koch's lymph," when introduced into the blood of healthy and diseased human beings, may be referred, in part at least, to the rapid multiplication and action of micro-organisms, similar to, if not identical with, the bacillus tuberculosis.

(c) The results of the chemical and microscopical examination of the contents of this vial of "Koch's lymph" have led me to exclude this liquid from the list of remedial agents.

I beg to be permitted to say that, in the effort to discharge what appeared to be my duty, I have endeavored to serve the art and not the trade of medicine, believing that honorable, legitimate medicine has no secrets to conceal, and holds no remedy which is not the common heritage of the glorious brotherhood of the noble republic of science.

With great respect, and with many thanks for the generous consideration of your Excellency, I have the honor to remain,

Your obedient servant,

JOSEPH JONES, M. D.,

"Coca" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of the commercial drug makes it uncertain, however. Robinson's Wine Coca (see page 28) we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of Cocaine being always determined by careful *assay*.

"I have used Ponca Compound for uterine affections. One, a very bad case of ovaritis and metritis, following a month after confinement. The results were all that could be desired." R. FRAME, M. D., Milford, Delaware.

Proceedings of Societies, Boards, etc

MEDICAL EXAMINING BOARD OF VIRGINIA.

The First Semi-annual Meeting of the Seventh Annual Session of the Medical Examining Board of Virginia was held in the Hall of the House of Delegates, Capitol Building, Richmond, Va., April 21st, 22d, and 23d, 1891.

The first meeting was called to order at 8 P. M. Tuesday, April 21st, by the President, Dr. Hugh M. Taylor, of Richmond.

The Secretary, Dr. Paulus A. Irving, of Farmville, Va., reported the result of the special meeting of a committee duly appointed for examinations during January, 1891 [which we hope to find room to report in full in our June number].

The remainder of the evening was spent in consideration of routine work, disposing of correspondences, and in fixing upon the questions to be adopted for examinations in the several branches, to begin to-morrow at 9 A. M.

CHIEF FEATURES OF THE MEDICAL EXAMINERS' LAW.

As there are many interested parties who are yet uninformed, or else misunderstand the effect of the law regulating the practice of medicine, etc., in Virginia, we will give a resumé of the requirements, at the risk of repeating matters published in former issues of the *Virginia Medical Monthly*.

The Medical Examining Board of Virginia went into effect January 1st, 1885. Any one having had a duly accredited license to practice medicine or surgery in his State prior to that date, and who furnishes satisfactory evidences that he was so licensed, is exempt from the operations of the Virginia Medical Examiners' law. But any other party who, since January 1st, 1885, undertakes to practice medicine, surgery, etc., in Virginia for compensation or reward, without first having received a duly issued certificate of having passed a satisfactory examination before the Medical Examining Board of Virginia, and then having his name "registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside," is practising illegally; and on conviction before any of the courts of the Commonwealth, shall be fined "not less than \$50 nor more than \$100 for each offence, and

shall be debarred from receiving any compensation for services rendered as such physician or surgeon."

All candidates for examination for license shall appear before the Medical Examining Board of Virginia during one or the other of the semi-annual meetings. One of these meetings occurs about the middle of spring of each year in the city of Richmond, and the other is held during the fall of each year—thus far invariably at the places and during the period of annual sessions of the Medical Society of Virginia. The second semi-annual session for 1891 will, therefore, be held in Lynchburg, Va., beginning October 6th, 1891.

Provision, however, is made for cases of emergency; but the claim of "emergency" must be decided upon by the President of the Board, after due inquiry into all the facts upon which the claim of emergency is based. If the claim of emergency is sustained by the President, then he shall appoint three members of the Board to assemble at a given place and time, where and when the three members shall organize themselves into a committee, and, *in session*, examine the candidate or candidates for license, and pass upon the examination paper or papers as if the Board were in full session.

PLAN OF EXAMINATION.

Applicants for examination must be on hand from the beginning hour of the examination in each of the eight sections, and must not leave the examining-room until he has handed in his papers relative to the section questions then upon the blackboard. Three hours are allowed for examination in each section; but the effort is made to so arrange the questions that they may be perfectly answered in about half that length of time.

All examinations are conducted in writing.

Any party wishing to be examined should come prepared with the examination fee of *five dollars*, required by law, and report immediately to the Secretary of the Board, who will be in the hall *half an hour* before the appointed time, to issue in due form the certificates for examination.

Each candidate will have a desk or table assigned him by number, and he is expected to occupy only that desk during the examination.

Candidates are not allowed, during the progress of examination, to communicate with each other verbally, or by notes or signs. Visitors will not be allowed in the hall

during the examinations, except by official invitation of the Board, and under no circumstances will they be permitted to communicate with or interrupt the candidates during the time of the examination.

Each candidate undergoing examination is expected to sign a paper containing a statement to the effect that he has neither received nor given any information on any of the subjects under examination during the time of the examination.

Candidates, in turning in their papers to the respective Chairmen of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers, as returned by the candidates, examined and marked by the respective Section Examiners.

The applicant is required to answer at least three-fourths of the questions satisfactorily; and he is to be rejected if he fails to answer satisfactorily thirty-three and one-third per cent. of the questions in any one section or sub-division of the whole examination.

The officers of the Board are:

President—Dr. Hugh M. Taylor, of Richmond, Va.

Secretary and Treasurer—Dr. Paulus A. Irving, of Farmville, Va.

Legislative Committee—Drs. Rawley W. Martin, of Chat-ham; Wm. P. McGuire, of Winchester, and Benjamin Harrison, of Richmond, Va.

Executive Committee—Drs. Wm. L. Robinson, of Danville; Herbert M. Nash, of Norfolk; Robert Glasgow, of Lexington, and the President and Secretary, *ex-officio*.

The Second Semi-annual Meeting of the Seventh Annual Session of the Board will be held in Lynchburg, Va., October 6th, 1891, when the Medical Society of Virginia is to convene in that city.

The following Examination Questions, after full discussions by the Board, were adopted:

Examinations April 22d and 23rd, 1891.

I.—SECTION ON CHEMISTRY.

Members:—Drs. J. H. Neff, of Harrisonburg, *Chairman*; Jesse H. Peek, of Hampton; P. B. Green,* of Wytheville; A. C. Palmer,* of Norfolk, and Benj. Harrison,* of Richmond city.

*The * after names indicates that the parties were in attendance.

Ques. 1. Explain the terms allotropy, isomerism, isomorphism, giving illustration of each.

Ques. 2. Give synonym, chemical formula, mode of preparation, physical and chemical properties of laughing-gas.

Ques. 3. Define osmosis. Give an illustration of osmotic action between liquids and between gases.

Ques. 4. What is a salt? Give an example, with chemical formulæ, of an acid and neutral salt, and state the difference between the two classes of salts.

Ques. 5. Mention two inorganic and two organic bases. Give the chemical formulæ of the two forms, and the chief chemical and physical properties which distinguish them as bases from acids.

Ques. 6. Give formula, preparation, and properties of common ether.

II.—SECTION ON ANATOMY.

Members :—Drs. Hugh M. Taylor,* of Richmond, *Chairman*; Wm. P. McQuire, of Winchester; R. D. Hufard, of Chatham Hill, and Paulus A. Irving,* of Farmville.

Ques. 1. Describe the mastoid portion of the temporal bone.

Ques. 2. Describe the iliac fascia, and the deep layer of the superficial perineal fascia.

Ques. 3. Describe the relations of the epigastric artery to the inguinal and femoral rings, and the landmarks for locating arteries in the palm of the hand.

Ques. 4. Describe the musculo-spiral nerve, and name its branches.

Ques. 5. Describe the crural or femoral canal.

Ques. 6. Describe the trachea.

III.—SECTION ON (I) HYGIENE AND (II) MEDICAL JURISPRUDENCE.

Members :—Drs. O. B. Finney,* of Onancock, *Chairman*; T. B. Greer, of Rocky Mount; J. E. Chancellor,* of Charlottesville; and James W. Tankard, of Burgess' Store.

I.—Hygiene.

Ques. 1. Give the sources of water, the impurities rendering it undesirable or dangerous for drinking or domestic purposes, and the methods of testing and purifying the same; mention diseases traceable to impure water.

Ques. 2. Describe the different modes of heating and light-

ing dwellings, with the advantages and disadvantages attending each.

Ques. 3. State the effects (on a healthy person) of breathing air vitiated by sewer-gas, illuminating gas, and the slow combustion of charcoal, in a closed room.

Ques. 4. State the hygienic management of infants from birth to second dentition, with reference to air, food, and clothing.

II.—*Medical Jurisprudence.*

Ques. 1. In a medico-legal sense, what constitutes a dying declaration?—and what is necessary to make it evidence in a court of justice?—and how should it be taken?

Ques. 2. In a case of alleged rape or assault on a child under thirteen years of age, state the danger to life and the duty of medical examiner's witness, with the proof necessary to establish it in the child and adult virgin.

IV.—SECTION ON PHYSIOLOGY.

*Members:—*Drs. Robert Glasgow,* of Lexington, *Chairman*; R. F. Young, of Love's Mills; S. W. Carmichael, of Fredericksburg; and John W. Dillard,* of Lynchburg.

Ques. 1. Define digestion. Enumerate its stages and give source, composition, and physiological action of saliva.

Ques. 2. Describe nervous mechanism of respiration, and locate respiratory centre.

Ques. 3. Give foetal circulation, and tell in what way it differs from that of the adult.

Ques. 4. Give number and coats of the eye and function of retina.

Ques. 5. State the physiological functions and properties of the facial nerve.

Ques. 6. What is a Graafian vesicle? State difference between corpus luteum of pregnancy and that of menstruation.

V.—SECTION ON MATERIA MEDICA AND THERAPEUTICS.

*Members:—*Drs. C. C. Conway,* of Rapidan, *Chairman*; A. Trent Clarke, of South Boston; S. W. Budd,* of Petersburg; James Parrish, of Portsmouth; and M. A. Douglass (Homœop.), of Danville.

Ques. 1. How do saline purgatives produce their effects? and in what conditions are they to be preferred to other purgatives?

Ques. 2. Give physiological action of ipecac, its therapeutic indications and doses for specific purposes.

Ques. 3. Name the principal agents that promote digestion and give their physiological action.

Ques. 4. What are the therapeutic uses of the simple bitters?

Ques. 5. Name the principal antipyretics and their mode of action.

Ques. 6. Give physiological action of atropia, and name some of the indications for its use.

Ques. 7. Give the composition of Epsom, Rochelle, and Glauber salts, of tartar emetic, and cream tartar.

Ques. 8. Give source of tannin, stramonium, veratrum viride, assafoetida, elaterium, and cantharides.

Ques. 9. Name the officinal preparations of opium and their relative strengths.

Ques. 10. Name the most efficient expectorants and their indications.

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Members:—Drs. Herbert M. Nash,* of Norfolk, *Chairman*; B. L. Winston, of Hanover C. H.; G. D. Meriwether, of Pedlar Mills; H. M. Patterson,* of Staunton; and George A. Tabor (Homœop.), of Richmond city.

Ques. 1. What influence have the sciatic or ischiatic spines upon the direction of the vertex in its descent in the pelvic cavity?

Ques. 2. Give the diagnosis and management of occipito-posterior positions.

Ques. 3. Diagnosis of breech presentations and the management of the after-coming head.

Ques. 4. What is involution of the uterus and the probable results when the process is incomplete.

Ques. 5. Give the prophylaxis and treatment of mammary abscess.

Ques. 6. Why are antiseptic measures now uniformly employed in obstetric cases? Name those mostly relied upon, and the manner of their application, both as prophylactic and curative means.

Ques. 7. For what varieties of uterine hæmorrhage should the tampon be employed? Of what material made and how applied?

Ques. 8. Name some of the causes of collapse and sudden death during labor and child-bed?

Ques. 9. State the causes and treatment of menorrhagia.

Ques. 10. What treatment should be instituted in chronic corporeal metritis?

VII.—SECTION ON PRACTICE OF MEDICINE.

Members :—Drs. Rawley W. Martin,* of Chatham, *Chairman*; Bedford Brown, of Alexandria; R. I. Hicks, of Warrenton; T. James Taylor,* of Walthall's Store; and W. P. Jones (Homœop.), of Petersburg.

Ques. 1. Define the terms simple fever, continued fever, periodical fever, eruptive fever, and give an example of each class.

Ques. 2. Give the etiology of typhoid fever.

Ques. 3. Give the diagnosis of remittent fever.

Ques. 4. Give the differential diagnosis of epilepsy.

Ques. 5. Give the diagnosis of diphtheria.

Ques. 6. Give the symptoms of scarlet fever.

Ques. 7. Give the symptoms of capillary bronchitis.

Ques. 8. Give the treatment of summer diarrhœa of infants.

Ques. 9. Give the anatomical character of acute dysentery.

Ques. 10. Give the pathological character of acute lobar pneumonia.

VIII.—SECTION ON SURGERY.

Members :—Drs. Wm. L. Robinson,* of Danville, *Chairman*; T. M. Bowyer, of Bedford City; Leigh Buckner,* of Roanoke; Jacob Michaux,* of Richmond city; and F. Webster (Homœop.), of Norfolk.

Ques. 1. Give causes of {
Synovitis.
Caries of bone.
Cystitis.

Ques. 2. Give symptoms of {
Colles' fracture.
Pott's disease of spine in
dorsal region.

Ques. 3. Give diagnosis of {
Hip-joint disease.
Appendicitis.

Ques. 4. Describe ligation of the common carotid artery.

Ques. 5. Describe amputation at shoulder-joint.

Ques. 6. What is the treatment of transverse fracture of patella?

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO WHOM
 LICENSES WERE GRANTED TO PRACTICE MEDICINE IN VIRGINIA, AFTER DUE
 EXAMINATION, APRIL 22ND AND 23RD, 1891, WITH THEIR POST-OFFICES,
 COLLEGES, AND YEARS OF GRADUATION.

Dr.	Chas. R. Alexander (col'd).....	Lynchburg, Va.....	Leonard Med College.....	1891
"	Oliver F. Blankenship.....	Richmond, Va	Med College of Va.....	1891
"	G. Jarvis Bowers (col'd).....	Wilmington, N. C.....	Leonard Med. College.....	1891
Mr.	John W. Brodnax.....	Manchester, Va.....	(Non-Graduate).	
Dr.	Henry F. Bruning.....	Richmond, Va.....	Med College of Va.....	1891
"	Madison O. Burke.....	Meridianville, Ala.....	Tulane University.....	1891
"	Benj. W. Cabeli.....	Danville, Va.....	Col. Phys. & Surg., Balt.....	1891
"	Frank Lee Campbell.....	Luray, Va.....	Col. Phys. & Surg., Balt.....	1891
"	T. M. Cherry.....	Wise C. H., Va.....	Col. Phys. & Surg., Balt.....	1891
"	A. Sydney Cover.....	Uniontown, Md.....	Univ. of Maryland.....	1891
"	Jas. Robt. Crockett.....	Burk's Garden, Va.....	Univ. of Maryland.....	1891
"	W. L. Dalby.....	Washington Co., Va.....	Med. College of Va.....	1891
Mr.	Roderick Dew.....	Welsh's, Va.....	(Non-Graduate)	
Dr.	J. Lynn Dietrich.....	Cold Hill, Va.....	Univ. of Maryland	1891
"	Henry B. Edmondson.....	Broad Ford, Va.....	Univ. of Maryland	1891
"	Benj. R. Gary.....	Wakema, Va.....	Univ. of Maryland	1891
"	Legaré Hargrove.....	Drivers, Va.....	Univ. of Maryland	1891
"	Walter F. Hartman.....	Staunton, Va	{ University of Va	1889
			{ Bellevue Hosp. Med Col.....	1890
"	Samuel W. Hobson.....	Macon, Va.....	Med. College of Va.....	1891
"	J. Blass Imhoff.....	(Not stated)	(Not stated).	
"	James S. Irvine.....	Evington, Va.....	Univ. of Louisville.....	1891
"	H. Gilbert Leigh, Jr.....	Petersburg, Va.....	Bellevue Hosp. Med. Col.....	1891
"	Edward L. Marshall.....	Clairmont, Va.....	Col. Phys. & Surg., Balt.....	1891
"	A. L. Martin	Brandywine, Va.....	Col. Phys. & Surg., Balt.....	1891
"	Edward T. Mason.....	Pungoteague, Va.....	Univ. of Maryland.....	1891
"	Wm. M. McKenney.....	Spottswood, Va.....	Bellevue Hosp. Med Col.....	1891
"	Austin Micklen.....	Montreal, Va.....	Med College of Va.....	1891
"	Gideon B. Miller.....	Sperryville, Va.....	University of Va.....	1890
"	Michael Minor.....	Comorn, Va.....	Univ. of Maryland.....	1891
"	Wm. F. Payne.....	(Not stated).....	Med. College of Va.....	1891
"	Emory Peery.....	Burk's Garden, Va.....	Univ. of Maryland.....	1891
"	Mark W. Peyser.....	Petersburg, Va.....	University of Va.....	1890
"	Otto Gustav. Ramsey.....	Norfolk, Va.....	University of Va.....	1890
"	Robt. Grigg Reese.....	Staunton, Va.....	Univ. City of N. Y.....	1891
"	Robt. W. Robinson.....	Danville, Va.....	Med. College of Va.....	1891
"	Robt. Lee Seward.....	Surry C H., Va.....	Univ. of Maryland.....	1891
"	Jos. J. Shanks.....	Salem, Va.....	Univ. City of N. Y.....	1882
"	L. Shaver.....	St. George, Tucker Co., W. Va.....	(Baltimore).....	1888
"	Edward M. Shipp.....	Barboursville, Va.....	Med. College of Va.....	1891
"	Chas. L. Seigel.....	Richmond, Va.....	Med. College of Va.....	1891
"	W. R. Siron.....	McDowell's, Va.....	Univ. of Maryland.....	1891
"	T J. Stanley.....	Goodall's, Va.....	Univ. of Maryland.....	1889
"	Edward A. Thomas.....	Wytheville, Va.....	University of Va.....	1890
"	Jas. E. Tompkins.....	Fredericksburg, Va.....	Univ. of Maryland.....	1891
"	Wm. M. Tunstall.....	Lovingson, Va.....	Univ. City of N. Y.....	1891
"	John Walker.....	Lynchburg, Va.....	Univ. of Maryland.....	1891
"	John Wm. Wallace.....	Williamsville, Va.....	Univ. of Maryland.....	1891

STANDING IN EACH SECTION OF THE APPLICANTS REJECTED APRIL 22ND AND 23RD, 1891,
AND THE COLLEGES FROM WHICH THEY RECEIVED DIPLOMAS.

The standard of requirements for license is an average mark of 75 per cent. on the whole. If, however, an applicant receives less than 33 $\frac{1}{3}$ per cent. in any one of the eight Sections, he is rejected.

[This Table is introduced solely to indicate the branches in which the greatest deficiencies of preparation of the applicants are most noticeable. Had it been required to rate applicants on English grammar, one-third of those who passed on the required branches of medical study would have received very low markings; and more than one-half of those rejected showed, in their examination papers, lamentable ignorance of English composition, spelling, etc.]

Nos. of examination papers.	INSTITUTIONS OF GRADUATION.	INSTITUTIONS OF GRADUATION.								Remarks.
		Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	
2	University of Maryland.....	21	28	70	70	60	71	70	36	426 53.25
10	Bellevue Hospital Medical College.....	78	37	83.3	80	75	72	75	57.5	557 69
13	University of the City of New York.....	60	22	65	70	75	66.5	40	58	456 57
14	College not given.....	68	64	80	45	70	66	82	66.5	541 68
24	Medical College of Virginia.....	57.5	52	75	86	84	78	76	62	570 71.25
27	College Physicians and Surgeons, Baltimore.....	50	62	75	50	76	77	57	59	516 64
31	University of Maryland.....	35	49	95	75	75	70.5	78	54	531 66
32	Jefferson Medical College.....	25	58	95	85	75	66	47	75	526 66
33	University of City of New York.....	60	64	90	61	80	71	40	69	555 69
35	Baltimore Medical College.....	28	24	75	90	80	68	50	76	480 60 60
38	Medical College of Virginia.....	54	37	70	84	87	79	44	84	539 67
41	Southern Medical College.....	40	67	75	80	84	61	75	82	564 70.50
43	Baltimore Medical College.....	45	27	70	80	62	73.5	77	67	501 63
44	Baltimore Medical College.....	47	26	80	75	90	75	83	72	568 71
45	Baltimore Medical College.....	.....	.....	.....	.....	.....	.....	.....	.....	Withdrew
50	Non-Graduate.....	70	51	85	83.5	80	65	75	62	571 71.50
51	Univ. of Maryland and Baltimore Med. Col..	25	31	88	78	80	76	47	51	476 59
52	University of Louisville, Ky.....	45	27	69	85	43	75	64	40	439 55
54	Non-Graduate.....	60	43	75	72	100	82	77	62	571 71.50
55	University of Maryland.....	65	52	70	75	85	75	80	87	589 73.50
57	Hospital College of Medicine, Louisville, Ky.	37	54	70	80	80	55	79	47	532 63
61	Louisville Medical College.....	14	52	75	78	80	85	76	40	500 62.50
65	Medical College of Virginia.....	40	.....	.....	.....	.....	.....	.....	.....	Withdrew
68	Hospital College of Medicine, Louisville, Ky.	45	36	70	75	85	75	78	49	513 64
69	College Physicians and Surgeons, Baltimore.	20	56	70	50	75	60	48	55	434 54
70	Non-Graduate.....	40	.....	.....	.....	.....	.....	.....	.....	Withdrew
71	Non-Graduate.....	5	20	95	25	50	39.5	25	46	305 38
72	Baltimore University, School of Medicine.	16	49	95	88	90	73	76	68	557 69
75	College Physicians and Surgeons Baltimore.	45	30	100	85	85	91	98	59	593 74
77	Howard University, Washington D. C. (col'd)	15	60	95	65	78	60	75	40	478 59

INSTITUTION REPRESENTED BY THE APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, IN SESSION IN RICHMOND, VA., April 22nd and 23rd, 1891.	Total Number Applicants from each College.	Total number Applicants Licensed.	Total Number Applicants Rejected.	Withdrawals.
Medical College of Virginia.....	12	9	2	1
University of Virginia*.....	5	5	.....	.....
University of Maryland.....	19	15	4†	.....
College Physicians and Surgeons, Baltimore.....	8	5	3	.....
Baltimore Medical College.....	4	.....	3	1
Baltimore University, School of Medicine.....	1	.....	1	.....
University of the City of New York.....	5	3	2	.....
Bellevue Hospital Medical College.....	3	2	1	.....
Jefferson Medical College, Philadelphia.....	1	.....	1	.....
University of Louisville, Kentucky.....	2	1	1	.....
Louisville Medical College.....	1	.....	1	.....
Hospital College of Medicine of Louisville.....	2	.....	2	.....
Tulane University, New Orleans.....	1	1	.....	.....
Southern Medical College, Atlanta, Ga.....	1	.....	1	.....
Leonard Medical College, Raleigh, N. C. (colored).....	2	2	.....	.....
Howard University, Washington, D. C. (colored).....	1	.....	1	.....
Colleges not given.....	3	2	1	.....
Non-Graduates.....	6	.....	2	1
Total.....	77	47	27	3

*One of these was also graduate of Bellevue Hospital Medical College.

†One of these was also graduate of Baltimore Medical College.

INSTITUTIONS REPRESENTED BY THE APPLICANTS
BEFORE THE
MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to April 23d, 1891.

	Total number of applicants for examination from each institution.	Total number awarded certificate on first examination.	Total number rejected on first examination.	Rejected applicants appearing for exam'n 2d time.	Certificates awarded on 2d examination.	Rejected 2nd time.	Rejected applicants appearing for exam'n 3d time.	Rejected 3rd time.	Incomplete examinations, withdrawals or otherwise.
Medical College of Virginia	84	67	13	5	4	1			4
University of Virginia—Medical Department.....	53	52	1						
College of Physicians and Surgeons, Baltimore, Md.....	55	36	17	6	4	2			2
University of Maryland—Medical Department, Baltimore.....	71	49	22	4	2	2	1	1	
Washington University, Baltimore, (Extinct.).....	1								1
Baltimore Medical College, Maryland.....	7		5						2
Baltimore University—School of Medicine.....	4		4	1		1			
Jefferson Medical College, Philadelphia, Penn.....	25	16	9	2	2				
University of Pennsylvania, Medical Department, Philadelphia.....	4	4							
Medico Chirurgical College, Philadelphia, Penn.....	1		1	1		1	1	1	
Woman's Medical College of Pennsylvania, Philadelphia.....	1	1							
Hahnemann Homeopathic Medical College, Philadelphia, Penn.....	2	2							
Bellevue Hospital Medical College, New York.....	11	9	2	1	1				
University of the City of New York—Medical Department.....	18	13	5	1		1			
College of Physicians and Surgeons, New York.....	5	5							
Geneva Medical College, New York.....	1	1							
National Medical College, Washington, D. C.....	1		1						
University of Georgetown, D. C., Medical Department.....	1	1							
Howard University, Med. Department, Washington, D.C.(colored)	16	2	14	4		4	1	1	
Louisville Medical College, Kentucky.....	6	1	5						
Hospital Medical College, Louisville, Ky.....	6	3	3						
Kentucky School of Medicine, Louisville.....	2	2							
University of Louisville, Ky. Medical Department.....	4	2	2						
University of Tennessee—Medical Department, Nashville.....	1	1							
Vanderbilt University—Medical Department, Nashville, Tenn.....	3	2	1	1	1				
Detroit Medical College, Michigan.....	2	1	1	1	1				
University of Michigan—Medical Department, Ann Arbor.....	2	2							
St. Louis Medical College, Missouri.....	1	1							
Columbus Medical College, Ohio.....	3	1	2	1	1				
Cincinnati Medical College, Ohio.....	1		1						
Cleveland Homeopathic Hospital Medical College, Ohio.....	2	2							
Leonard Medical College, Raleigh, N. C., (colored).....	7	5	2						
Medical College, State of South Carolina, Charleston.....	1		1	1	1				
University of Vermont, Burlington.....	1	1							
Heidelberg, Germany.....	1	1							
College of Physicians and Surgeons, Columbia, New York.....	1	1							
Georgetown College, Washington, D. C.....	1		1						
University of Virginia and New York.....	1	1							
Southern Medical College, Atlanta, Georgia.....	2		2						
Atlanta Medical College.....	1		1						
University of New York.....	1		1						
Chicago Homeopathic Medical College.....	1	1							
St. George Hospital, London, England.....	1	1							
King George Hospital, London, England.....	1		1						
King College, London, England.....	1		1						
University of Va. and Bellevue Hospital Medical College, N. Y.....	1	1							
Tulane University—Medical Department.....	1	1							
University of Maryland and Baltimore Medical College.....	1		1						
Colleges unknown.....	8	6	1						1
Non-Graduates.....	34	12	17	1		1			5
Totals	460	307	138	30	17	13	3	3	15

**GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF
BALTIMORE.**

[Reported by Dr. WM. S. GARDNER, Secretary.]

March Meeting.—The President, Dr. Henry M. Wilson, in the chair.

Technique of Cæsarean Section.

Dr. Howard A. Kelley rejects Porro's operation except under special circumstances, as when there is good reason to suspect septic infection, as after prolonged efforts at delivery, at turning, or the use of the forceps, also in cases of large tumors of the body of the uterus, or in some cases of cancer or in uncontrollable hæmorrhage from the placental site. Thus limited, "the conservative operation," and the Porro operation, are mutually exclusive, not occupying the same field. The mortality of the Porro operation is probably greater than that of the conservative.

In a healthy case, free from sepsis, with unruptured membranes, it is not necessary to deliver the uterus from the abdomen before incising it and delivering the child. It is rarely necessary to use any constricting ligature around the cervical end of the uterus. Excessive hæmorrhage from the placental site or the margin of the womb can very well be temporarily controlled by constricting the cervix with the hand of an assistant. The uterine sutures consist of deep sutures, embracing the peritoneum and muscularia, but not the decidua. About ten such sutures are needed. Between each of these deep sutures, half deep sutures can be passed, securing perfect coaptation of the peritoneal surfaces. The sero-serous sutures are not necessary in cases free from any suspicion of infection. In such clean cases, the uterus is dropped back into the abdomen and covered with the omentum. If there exists suspicion, it is of advantage to draw the omentum down behind the uterus, thus favoring the discharge of any septic material through the lower angle of the wound.

Drainage of the pelvic cavity cannot be efficiently carried out. The abdominal wound must be concealed by a dressing made of snowy cotton dissolved in alcohol and ether, containing one part bichloride to 16,000. A little strip of gauze is laid over the wound saturated with this solution. This adheres until it is time to take the sutures out, concealing the wound, and preventing contamination from the outside much better than many layers of gauze and cotton.

The baby should be allowed to nurse as soon as the mother has thoroughly recovered from the anæsthetic.

The vagina should not be douched out as a matter of routine. The vaginal outlet should be secured from the introduction of sepsis from without by separating the labia and throwing into the vulvar orifice a drachm of powdered iodoform and boric acid [1 to 7]; a cotton pad loosely applied to the vulva should be changed as often as soiled by the discharge. The patient thus passes through a perfectly normal puerperium.

Dr. Chas. P. Noble said that all cases are not typical. He reported a unique case in a woman on whom Dr. Kelley had operated in a previous pregnancy. As a result of that operation, there remained a fistula opening from the uterine cavity through the abdominal wall. Notwithstanding this fistula, she became pregnant, and for several weeks the amniotic bag protruded into the opening, so that there was nothing between the foetus and the outer world but the thin amniotic sac. This sac ruptured at the thirty-third week. The woman had a generally contracted pelvis; besides having a large mass of tissue behind the cervix, left from her previous Cæsarean labor. Had spontaneous labor been possible, the foetus would have escaped through the fistula and not per vaginam. In view of the condition, Dr. Noble thought Cæsarean section preferable to delivering the mutilated foetus *per vias naturales*.

The finger was inserted into the uterus through the fistula, and with this as a guide the incision was made. Sufficient room not being afforded for delivery, the peritoneal cavity was opened and the uterine incision lengthened. The living foetus was then delivered. The placenta and membranes were firmly adherent, and were slowly peeled off. To control bleeding during this time it was necessary to insert the uterus through the abdominal incision, to enable the assistant to grasp the lower segment. The patient passed through a perfectly normal puerperium, and is now quite well and soundly healed.

Dr. Noble has seen three cases of Cæsarean section—all having made good recoveries. When the operation is done at the proper time and after the method described by Dr. Kelly, he is sure this result will be quite uniform. The essentials of success are—(1), Operation at the proper time, before labor, or at the beginning of labor; (2), Rapidity in operating; (3), Accurate suturing; (4), Asepsis.

With reference to suturing, he believes that the Lembert

suture, as ordinarily described, is purely theoretical. The peritoneum will not hold a suture. Operators have unconsciously included the deeper tissues in the so-called Lembert suture. An important point, not generally recognized, is, that the diagnosis should be made in the last weeks of pregnancy, and, under ordinary circumstances, the operation should be decided upon and done at the close of pregnancy before labor sets in, or immediately thereafter. He would not do the modern Cæsarean section in a case which had been tampered with by efforts to deliver with the forceps or by version; but, in such cases, would prefer the operation. In Philadelphia, in the last four years, twelve Cæsarean sections have been done, and ten mothers have recovered. One that died had pneumonia at the time of the operation. The other case was one in which the surgeon, at the same time, removed a fibroid tumor.

Dr. B. B. Browne thinks all the procedures recommended are, in the main, correct, and in accordance with the rules and suggestions laid down five or six years ago by Garrigues, Sænger, and Leopold; these should be carried out in ideal cases, but, unfortunately, we meet with many complications which must be dealt with. Having recently performed the operation himself, and looked up the literature and technique of the subject, he was surprised to find that we can to-day make but little improvement or change for the better. In 1886, Sænger had operated four times, saving all the women and children. Dr. Leopold had operated nine times and lost one woman, saving all the children.

Dr. T. A. Ashby thinks Dr. Kelley's brilliant success with the Cæsarean section is convincing proof of what can be done when the section is instituted under proper conditions and at a proper time. The future of the operation rests upon a proper and judicious selection of the case, and upon an immediate resort to the section before other methods of delivery have been attempted and abandoned. He doubts whether the Cæsarean section, under such conditions, will give a higher mortality than the ovariectomy of ten or fifteen years ago. The technique of the section is simple enough, and certainly its mechanical execution is not as difficult as that necessitated in the removal of many conditions of tubal and ovarian disease. Hæmorrhage is not large, and is easily controlled. Septic processes should not follow, if strict aseptic precautions are observed.

The progress of the section, as a substitute for other methods of delivery, rests upon an early and clear recogni-

tion of the pelvic measurements, and a prompt acceptance of this method as the proper procedure in the given case. When this is done, the success of the section is not compromised by unfortunate interference in other directions.

Dr. W. P. Chunn thinks he would have removed the ovaries or tied the Fallopian tubes to prevent future conception.

Dr. Noble, in doing a Cæsarean section, would not touch the ovaries and tubes, but would do nothing to prolong the operation. Tying the tubes would probably cause salpingitis. This objection is purely theoretical. So far as he knows, this has been done only twice.

Dr. Brinton has been for some years interested in measuring the pelves of women. With the hospital surgeon, who has the best facilities, the Cæsarean operation will undoubtedly be the best in cases of extreme pelvic contraction; but with the average practitioner, he thinks that craniotomy will hold the place. In speaking of craniotomy "holding its place," he referred to those cases of pelvic contraction where the child could be extracted without harm to the mother—say from $1\frac{3}{4}$ to 3 inches pelvic diameter.

Cause and Process of Salpingitis, Ovaritis, etc.

Dr. T. A. Ashby presented a series of nine charred remnants of tubal and ovarian inflammation to invite discussion. They represent nearly every phase of intra-pelvic inflammation, and illustrate the various degenerative conditions found in the pelvis after an inflammatory fire has passed over these tissues.

We have the same old story in all of these cases, save two—one the large specimen of a tubal sac of uncertain origin, probably an interrupted tubal pregnancy of long standing, and the other the remnants of a catarrhal salpingitis and ovaritis, with intra-pelvic adhesions. As to the other seven specimens, each of the women had borne children: in each case the history of the intra-pelvic trouble dates from the last lying-in period, which was accompanied with mild or severe symptoms of child-bed fever. In each of these women there was an old lacerated cervix, in some more pronounced than in others. In this wound septic material gained lodgment, and established a septic process which extended from the cervix to the tubes and to the intra-pelvic peritoneum. He has observed this septic process in its very beginning, when limited to the cervix and cavity, and seen the temperature fall from 103° to normal

within twelve hours after thorough cleansing and disinfection of the cervix and cavity, and a complete arrest of the process before the tubes were involved. He has seen tubal and general pelvic-peritonitis in active force following immediately the infection in the cervix and cavity. This experience convinces him that we have in the lying-in state an explanation of those intra-pelvic diseases. Now, is it necessary that the lying-in period should be surrounded with extra hazard, high temperature, and severe pain? Aseptic-endometritis following parturition may run a very mild and low-grade course, and still result in sub-involution salpingitis, pelvic adhesions, and other intra-pelvic conditions which impair the normal function of these organs.

The lesson clearly taught by such experience is that aseptic conditions should be enforced in every case of labor, that the least suspicion of sepsis should lead to immediate investigation of the uterine cervix and cavity with a view to thorough cleaning and arrest of the septic process. If this be done, we can cut short sepsis and arrest a condition which will surely extend to the tubes and pelvic peritoneum in the absence of prompt attention.

Dr. B. B. Brown thinks that laceration of the cervix is so frequently found in married women suffering from tubal disease because the purulent discharge from the uterus passing over the torn surfaces prevents their union, while the septic material also extends to the tubes; when there is no septic material in the uterus, the lacerated surfaces readily unite, and the tubes are not affected.

Dr. J. Whitridge Williams said that, to a skillful palpator, it almost seems that the majority of women examined have more or less tubal or ovarian disease. The etiology in many cases is doubtful, but most observers appear to cling to Noegerrath's theory of latent gonorrhœa. In most cases it is impossible to discover any species of bacteria in the pus, either under the microscope or by culture methods, which shows that the bacteria which caused the trouble have long since died; for closed pus-cavities are not particularly favorable for the growth of organisms. In two cases we found undoubted gonococci, and in a case following an imperfect abortion the streptococcus, and in another case the staphylococcus aureus.

Clinically, the cases due to pus organisms are much more acute and virulent than those due to the gonococcus. These results correspond with those of Zweifel, of Leipzig. He also found the gono- and streptococcus, but not the staphy-

lococcus. In one of his streptococcus cases the subject was an undoubted virgin, and he accounted for the infection by an abscess following an attack of typhoid fever some years before. He does not consider the relation of lacerated cervix to salpingitis a factor in the production of the disease, but regards it merely as a coincidence. If it were a potent factor in producing the trouble, we should find salpingitis and pelvic adhesions far more frequently than we do now; for we must remember that in most women there is more or less laceration of the cervix during labor. Moreover, this cause is certainly inapplicable to the frequent cases occurring in nulliparous women, and especially in virgins. A close study of the clinical history of a number of cases inclines Dr. Williams to believe that the majority of cases follow infection during labor or after an incomplete abortion; for in many cases it is impossible to obtain even a history of leucorrhœa before the labor, which would apparently exclude gonorrhœal infection. By infection during childbirth he does not necessarily mean the cases in which we have well-mark puerperal fever, but the milder degrees of infection as well; for most of the cases of so-called milk-fever are due to infection, and may give rise to serious results. Zweifel, on the contrary, who has just published a remarkable series of 79 salpingo-öophorectomies, with only one death, believes in the gonorrhœal origin of most cases. Saenger traces most of the cases in virgins back to a gonorrhœal salpingitis during childhood, which has persisted and ultimately affected the Fallopian tube. While Dr. Williams does not subscribe to this view, he can say that it is quite probable; for lately he has seen a number of cases of undoubted gonorrhœa in little girls of from two to seven years of age, in which there was no suspicion of criminal action. In eight cases of vaginitis in little girls which he has examined, he found gonococci in six of them. In several the mode of infection was quite clear. In one case the husband acknowledged an attack of gonorrhœa with which he infected his wife during her pregnancy, and each of the children born after it had ophthalmia neonatorum, followed when they were older by gonorrhœal vaginitis. In another case, an older brother had gonorrhœa and his two little sisters used his towels for bathing.

These remarks will show that the vaginitis of little children is not of strumous origin, as generally supposed, and that it demands a more active treatment than is generally

employed, especially when we consider its possible consequences.

Dr. Brinton corroborates the views of Dr. Williams in regard to the specific origin of the cases of vaginitis in children—having recently treated, first, the father with gonorrhœa; later the mother, and within a fortnight from the time the father consulted him, he was called to see the little daughter, aged four, with a severe “vaginitis,” which yielded to the usual treatment in about the usual time. His experience has been that if a child is found with a “vaginitis,” close investigation will prove that some older member of the family has either a “urethral” or “vaginal” discharge.

Dr. Noble said that it is now the fashion to call all unilateral collections of blood extrauterine pregnancies. But he has recently had a case that proved not to be pregnancy. With reference to the uterine hæmorrhage coming from the tubes, we do know as a fact that it is possible for blood to come from a tube. This was common to all in the days when the stump was treated by the extra peritoneal method, in doing ovariectomy. He is quite sure that gonorrhœa has been the cause of most of the cases of pyosalpinx that he has seen, and he thinks that the cause of salpingitis in young women is often simple infection. Many cases of dysmenorrhœa in young women are due to salpingitis. In such cases it is unnecessary to question their chastity. He agrees with all the speakers in reference to the relation of lacerated cervix to salpingitis. Where there is laceration there is frequently an endometritis, and there is no reason to think that it may not follow out into the tube. He believes firmly in the great value of the drainage-tube. When properly cared for, it is practically free from objection, while being of most positive advantage in allowing the escape of serum and blood.

Strophanthus for Heart Failure.

Dr. H. P. C. Wilson did an exploratory laparotomy for a fibro-cystic tumor. In manipulation he found great tendency to bleeding, and as he could not get at the ovaries nor remove the tumor without causing death, he closed the abdomen. She got on well for fourteen hours, when she became very feeble, heart and respiration very weak. She was put upon digitalis and muriate of quinine and urea, but it did no good. The heart became so weak that it could not be felt. He then began with five minims of tincture of

strophanthus every three hours, and ether m. xx hypodermically every three hours. The pulse became stronger, 125 to the minute, and she felt better. The next day she became unconscious, pupils dilated, face flushed, pulse 120, temperature normal. The medicine was withdrawn, but she remained in this condition about 24 hours. To-day she is better, consciousness returning, pupils contracting. He has had no experience with the poisonous effects of strophanthus.

712 N. Howard street.

TENNESSEE STATE MEDICAL SOCIETY.

[Reported by FRANK TRESTER SMITH, M. D.]

The Fifty-Eighth Annual Meeting of this Society was held in Nashville, April 14th, 15th, and 16th. The meeting was one of the largest in the history of the Society, there being about 150 delegates in attendance.

On the first day, after the usual preliminaries and invitations to visit various institutions, the Secretary presented his report, which showed a membership of 342.

The Treasurer's report showed that the Society was in a good financial condition. There was some difference between the Treasurer and the Secretary, owing to the fact that the latter had received dues from certain members who should have been suspended in accordance with the by-laws. This created quite a breeze, but the matter was finally adjusted amicably.

Dr. Frank Trester Smith appealed from the Publishing Committee on account of their leaving out of the *Transactions* of 1889 the descriptions of certain inventions, which the Society at that meeting ordered to be printed, but which, through some misunderstanding, were omitted. The paper was referred to the new Publication Committee.

Dr. J. F. Grant was elected an honorary member for life. Dr. Grant was a former President of the Society.

Dr. Thos. E. Lipscomb, of Shelbyville, was invited to a seat on the right of the President. He is one of the oldest members of the Society, having missed but few of its meetings since the organization 58 years ago.

One of the most enjoyable sessions was that of the night of the first day, when a musical and literary feast was spread for the benefit of the Society. Dr. J. D. Plunkett, of the Committee of Arrangements, presided, and an-

nounced that the meeting was held for the purpose of welcoming the doctors to the city.

After prayer by the Rev. Jerry Witherspoon and some instrumental music, Mayor Litterer was introduced, who welcomed all to Nashville.

Mrs. A. H. Stewart then sang "Heaven Hath Shed a Tear," which was well received and encored.

Gen. H. H. Norman then welcomed the Society on behalf of the Governor, who was prevented from being present on account of illness.

Judge J. M. Dickinson was then introduced, and welcomed the Society on behalf of the citizens.

Then followed the address of the evening, by the President of the Society, Dr. George A. Baxter, of Chattanooga: "Topics of Import to the Medical Profession."

The above, interspersed with music, instrumental and vocal, formed a most enjoyable programme.

The following is a list of most of the papers read at the various sessions:

Report of State Board of Medical Examiners—Dr. T. J. Happel, Trenton.

Ovulation and Menstruation—Dr. Geo. R. West, Chattanooga.

Dr. J. R. Buist, of Nashville, contributed a paper entitled

Phthisis Pulmonalis, with Special Reference to Prophylaxis.

He began by saying that we should never relax our efforts as long as consumption, with its multiplied ills, afflicts our race with its sickness, pain, and death, nor have we any right, as scientists, to despair of the ultimate triumphs of knowledge and the practical results of scientific research. The acknowledged failure of all the proposed plans for the cure of phthisis, based upon therapeutical agents, should lead us upon other lines of effort for its destruction. The impossibility of procuring for the mass of consumptives the benefits of climate and altitude, even if these benefits approximated the value some assign them, should also admonish us to look to the higher plane of preventive medicine in dealing with this disease.

But some may ask, Do we not now possess a remedy for consumption in the *tuberculin*, the Koch lymph? So far as yet demonstrated, we think not. The high expectations so recently excited by these inoculations do not seem to be verified. Certainly for advanced stages of phthisis, and many other conditions of tuberculosis, it is unsuited and

positively dangerous; and it is not settled whether any benefit can attend its use in the incipient cases. In making this statement, we do not detract anything from the real value and merit of the discovery, and mean no disparagement of the genius of Koch. He justly deserves the recognition and honor the world has bestowed on him. His discovery sheds a new light upon pathology and bacteriology, and cannot, in the future, fail to be of great utility; yet at this time it does not merit the position of a remedy for pulmonary consumption.

Preventive medicine is, after all, the acknowledged aim and end of scientific research. Though still in its infancy, it has accomplished wonders for humanity; and it is obvious that its first and highest triumphs are to be won among the class of zymotic and infectious maladies. The power of prevention is incalculably more precious than any therapeutical measures. It is therefore highly incumbent upon us, first, to assure ourselves of the modern theory of consumption; and so convinced, we should direct our efforts to a rational prophylaxis of this fatal disease.

Theoretically, we may know in what prevention should consist; yet a practical application of the requirements of an effective prophylaxis will be found a matter of great difficulty, and will take many years of education for even approximate perfection. Yet, as it is the true direction for medical effort to be expended, and as it promises far more positive results than therapeutics, we should not hesitate or falter.

The causation of all infectious maladies consists in the concurrence and union of two separate and distinct physical conditions—namely, the existence and presence of a germ, a pathogenetic bacterium, and then the implantation of this in a suitable nidus or habitat, in which its proliferation is possible.

In this instance, the body, or some part, tissue, or organ, must possess a certain receptivity, vulnerability, or susceptibility by which the vitality of this pathogenetic bacillus may be assured.

Bacteriology has taught us that no form of bacteria has any spontaneous generation, but that all spring in succession from a pre-existing individual. In bacillary consumption we must assume that the rule of its origin is by transmission from without, and this is illustrated by the fact that the tissues nearest the point of inoculation or invasion become first and most intensely implicated. Immunity the

from pulmonary consumption must be secured, on the one hand, by the destruction of the germs themselves, or on the other, by placing the human system in a condition of resistance to their growth and multiplication. In accomplishing this latter, not only the improvement and maintenance of the general health of the individual is to be kept in view, but the elevation of the race in the scale of physical well-being. It goes without saying that all causes that undermine the strength and vigor of the system are to be avoided. The speedy relief from chronic ailments, the complete and early convalescence from acute attack of sickness, the breathing of impure air, and the consumption of unwholesome food, come in this category; more especially the health of the young and growing—those in the formative period of life—is to be guarded with sedulous care.

Recently a contribution to this subject has been made by two French physicians (Seance du 24 Fevrier, Academie de Medicine). In one case a young lady died in a boarding-school of violent tubercular meningitis. She was of healthy antecedents—no pre-disposition. During a few years there had been in this school six deaths, covering 13 patients affected with tuberculosis. Some few days after the death of this girl, the cow which had been supplying milk for the institution was sent to the butcher and slaughtered. The udder was the seat of extensive deposit of tubercle. None of the others who died had any phthisical parentage. The reporter, M. Olliver, traced all these to infection from this diseased cow. In the other case, M. Nocard received an anatomical specimen, taken from a five-months-old calf, which had died from the disease, and which was filled with tuberculous deposit. The owner was requested to send the udder taken from the mother of the calf when she was slaughtered. This happened soon after. On examination of the lungs, the mesenteric ganglia and the udder were full of tubercle; and yet this cow had not long before this taken a prize at a cattle-show. The inference from this is, that all milk should be boiled before being drunk.

How much tubercular disease we have among our cattle in this State no one knows. It is probable there is a large amount. The bovine species are specially susceptible to tubercle; in fact, there are some investigators who believe it was originally transmitted from the cow to the human subject. At all events, nothing is plainer than that every municipality and every State should have expert inspectors to investigate the condition of cattle and meat, of the dairies,

and the products they sell. It is just as impossible for a community to protect themselves against the influence of a poison transmitted in this manner as it is against an invasion of cholera or small-pox. It is more incumbent upon the State to enact laws for the preservation of health, in many instances, than for the collection of debts. Nothing but ignorance can excuse our authorities, State, county, and municipal, for their disregard of the plain requirements of health and life.

The professional mind, no less than that of the laity, still hopefully turns to the influence of climate as the one great desideratum for the prevention and cure of pulmonary diseases. This and that climate is extolled as positively beneficial, as both remedial and prophylactic. Climate, of course, is a complex term, and includes many conditions. Often we advise a change of climate when only a change of locality is needed. Not in the least would we underrate the true value of a desirable climate. A salubrious region, with a well-drained and uncontaminated soil, the fresh, invigorating air of high altitudes, an abundance of cheerful sunshine and minimum of humidity, are conditions conducive to the strongest and most robust bodily health, which is the prime condition that constitutes anti-susceptibility to the invasion of the system by bacteria. Such a climate will admit of its inhabitants living in the open air, indulging in much exercise, and securing strong physical development. More than this, the liability to nasal, throat, and bronchial catarrh is much diminished, and another predisposing cause is removed. It is, however, a great fallacy to regard the conditions expressed by the term *climate* as being positively and *per se* antagonistic to the existence of phthisis pulmonalis. A very important factor in this supposed climatic immunity is the fact that nearly all these regions are newly inhabited or very sparsely populated. The tubercle bacilli are very tenacious of life, and there is no evidence to show that they cannot live in any climate and at any altitude. As soon as these districts become peopled and cases of tuberculosis are imported, the disease will be sufficiently common.

Doubtless in time certain portions of Colorado, Arizona, and Texas will become the home of the bacillus tuberculosis, as Europe and England are to-day. It should be a consoling reflection to those poor mortals who have no hope of ever migrating to the blue skies and lofty sierras of the far West to know that the infinite wisdom that created this

circumambient ocean for our abode also provided for its ready purification, except where artificial civilization has thwarted His benign purposes. The earth's uneven surface, the alternations of heat and cold, the every-varying humidity and dryness of the atmosphere, the currents and counter-currents that agitate it, are provisions for its rectification and healthfulness.

In a paper by Dr. W. H. Vertrees, of Nashville, on

Posology,

He remarked that the study of *the dose* is the study of the laws of cure. For instance, in opium poisoning, the very life of the patient may depend on the proper dose of belladonna. It is an entire misconception of the therapeutic action of a drug to give a sedative dose when a stimulant is needed. Medicines generally have different effects according to the dosage. In Germany, the law defines the maximum dose; beyond that, it is considered lethal, and in violation of law. Hence, in that country, the dispensing of medicines is taken entirely out of the hands of the physician and given to the pharmacist. But in this country the doctor may be both prescriber and dispenser of a drug. Hence there is much less uniformity of action of drugs, as prescribed, in this country than in Germany. He argued that something more definite and uniform should be promulgated by the experienced leaders of the profession in America to establish a maximum dose, at least, of all the leading drugs in certain recognized pathological conditions. The common scandal of the profession is over-dosing, and too frequent dosing by incompetent physicians.

Treatment of Wounds of the Cranial Sinuses—Dr. W. T. Briggs, Nashville.

A Plea for Early Operative Interference in Ovarian Tumors—Dr. J. H. Blanks, Nashville.

The Treatment of Pneumonia: Past and Present Methods: Has the Mortality been Changed?—Dr. Thos. M. Woodson, Gallatin.

Dr. C. W. Beaumont, of Clarksville, Tenn., read a paper on—

Preparatory Treatment of Parturient Women.

He said, While it is true that the great mass of child-bearing women pass through this period of their lives in an uneventful way, it is perhaps equally true that few indeed enter the lying-in chamber in a perfect physiological condition, and that the number of those who suffer the conse-

quences of abnormal parturition is greater than it ought to be in this marvelous age of progress. These facts are suggestive of the eminently practical question, Can we, by timely supervision and preparatory treatment, render parturition easier and safer, and prevent some of the accidents and diseases peculiar to that process?

To accomplish an end so desirable, and which is steadfastly believed to be attainable, requires a somewhat radical change of the existing relations between the physician and this order of his clientage. Founded on a necessarily limited and personal observation of many years' duration, the fact is assumed to be a general one, that obstetricians in this country rarely see their patients until labor has actually set in. They are far too wide apart, and the advisory relation commonly subsisting between them is for several months suspended, the reason for which is not alone the modesty so becoming to woman, which we would not remove even if it were possible. But there is another cause easily removable, which unconsciously is the controlling one, and that is woman's ignorance of the vital phenomena concerned in reproduction and the resources of medical art. To her mind conception, gestation and parturition is simply and correctly a natural process; a birth is regarded as quite as natural an event as a death, or as the ingestion and defecation of her daily food.

Now, with reference to the treatment of these persons there is, of course, no specific measure, nor indeed a special plan to be recommended; but within the last two months of pregnancy the careful investigation of each case should be made, of general conditions, as anæmia and plethora, nervous and emotional excitability, and especially of the several excretory functions. Frequently we shall be told by the patient that she is perfectly well, when such examination will reveal some defect of momentous import. This necessary procedure, coupled with the due consideration of the final causes of puerperal disease, will lead us to a correct line of treatment; but there are certain general principles which are so clearly indicated by the etiology, that they may be briefly reviewed together, and with especial reference to child-bed fevers and convulsions. Sudden as is the onset of these diseases, there are certain antecedent conditions which are necessary to their production; and to ascertain these conditions, or predisposing causes, the facts of bacteriology, chemistry, and morphology, are to be employed.

Hygienic measures are the most difficult to enforce, especially amongst the more opulent, because of the notoriously sedentary habits of our American women. Averse to active muscular exertion, the vigorous alternating movements of which, in contraction and relaxation, are essential to the rapid expulsion of waste, which otherwise must accumulate in these organs, such exercise is worthy to be insisted upon. Lack of such necessary physical exertion, with the gratification of an appetite oftentimes depraved, leading to excess of food daily taken, and much of that of doubtful quality, and pouring into the circulation matter often polluted with peptones and ptomaines, it is no wonder that the vital organs sullenly refuse to perform their appropriate work under their poisonous influence. But the wonder is that under such conditions one should successfully resist even a slighter shock than that of child-birth. Stercoræmia is capable of doing as much mischief as is uræmia, and its perilous invasion should be as carefully resisted. Therefore, stomach and intestinal digestion must be corrected where faulty, and abundant defecation promoted. By maintaining a pure blood supply, and the emunctories, including the skin, in good working order, the elimination of the products of the many chemico-vital changes is secured, with a minimum risk of puerperal fever.

Eclampsia has so long been associated in the professional mind with albuminuria, that the urine should be examined at suitable intervals, not merely to discover albumen, if it be present, but for the much more important object of ascertaining whether nephritis, acute or chronic, exists.

The Anatomy and Pathology of the Ileo-Cæcal Region—Dr. Richard Douglass, Nashville.

Urethral Stricture—Dr. J. W. Handley, Nashville.

Abscesses—Dr. T. J. Happel, Trenton.

Has Progress been made in the Treatment of Typhoid Fever—Dr. C. M. Sebastin, Martin.

Chronic Endometritis—Dr. J. S. Cain, Nashville.

Retained Placenta In Miscarriage—How Shall We Treat Such Cases?

In a paper by Dr. A. J. Swaney, of Gallatin, Tenn., on this subject, he said that the dangers from retained placenta in miscarriage are hæmorrhage and septicæmia. Among those who favor active interference in such cases are Tyler Smith, Murray, Simpson, Leishman, Mundé, Grandin. Their reasons given are the frequency of these dangers in prolonged de-

livery of the placenta; and the almost constant possibility of manual extraction which at once assures safety from hæmorrhage and septic poisoning. Simpson directs if the cervix is patent, act at once; if not dilated, dilate at once. The woman anæsthetized, depress the uterus as much as possible by the external hand, and with the index finger of of the other hand, remove the placenta and membranes. If he cannot sufficiently depress the uterus with the hand, forcibly drag it down by a double tenaculum fixed in the cervix. Mundé and Grandin go further, and curette the cavity of the uterus with special instruments. These curettes are applicable where there is a large mass to remove, and where the cervical canal is open. When dealing with shreds and the os is less patent, the dull curette of Thomas answers. Place the woman in the left lateral position and the removal is through a Sims' speculum. Dr. Grandin directs, after the removal of the placenta, that the cavity of the uterus should be carefully dried by a cotton applicator and tamponed by a slide applicator, the cotton on which has been saturated with the compound tinct. of iodine, which is a gentle styptic and disinfectant, or if there is much fetor iodoform is preferable.

Among the authorities who counsel waiting for serious complications before interfering are Ramseotham, Davis, Burnes, Fleetwood Churchill, Graily Hewitt, Charpentier. Charpentier says: "If the fœtus has been expelled and the placenta remains, what is to be done? Usually nothing; nature can do the work. The placenta may remain days before being expelled; whilst there are no complications, wait at least till the placenta is engaged in the cervix and detached from the uterus, and then extract. If the placenta is not engaged and the cervix is closed, wait, and in case of hæmorrhage tampon, give ergot, never the ergot alone. If the placenta is still adherent, and is in part engaged in the cervix, give ergot, for the cervix cannot contract, since its canal is filled by the placenta. If the placenta is at the fundus and adherent, wait still in case there are no complications; interfere in case of accident. If it be hæmorrhage, the tampon and ergot. If it be putrefaction of the placenta, recognize this and extract at once; we must not hesitate, but we must immediately extract the placenta or secundines, and this, it is understood, is all the more difficult, the more completely the cervix is closed. If the cervix is permeable to the finger or instruments, the operation is easy. If closed, then we must dilate at once with sponge, branched steel di-

lators, or with Barnes' bags. Dilatation once accomplished, we must proceed to extraction, and this must be done by the finger or instruments, according to the case." After the cervix has been dilated, and the woman on her back, depress the uterus with the left hand as much as possible, and with the index finger of the right hand, the adherent remnants are detached and brought away. If this does not suffice he resorts to instruments.

How are we to recognize septicaemia? The first symptom is fetor of the lochial discharge. The discharge further loses its normal character and diminishes in quantity, becoming black or brown. It is no longer bloody or sero-sanguinolent, but is composed of reddish black detritus, the debris of the retained mass, involution ceases, and the uterus becomes sensitive to pressure. At times tympanites supervenes with or without diarrhoea. The woman has chills—sometimes violent and single; at other times many, separated by intervals of one or two days; temperature rises to 104° , 105° F; pulse ranges to 120 or more. The temperature shows a marked remission, but the pulse remains high, and thus it may be day after day until the woman dies, or the fever may be continuous. The general condition alters for the worse. The eyes are sunken, anorexia and vomiting exist, the woman grows weaker, and if we cannot suppress these symptoms, dies of septic poisoning.

He believes with Mundé and Grandin, that active interference in the removal of the retained placenta is safe, easy, and forthwith guarantees the woman against sepsis. Active intervention does not mean unnecessary intervention. Place the woman in the left lateral position, and with a dull wire curette remove the placenta or any part of the secundines that may remain through a Sims speculum. This is far better and easier than the method of dragging or pressing down the uterus and introducing the finger into the uterine cavity. The uterine cavity should then be washed out with hot water slightly carbolyzed through a Jamson uterine douche, and repeated every six or eight hours until all fetor disappears from the lochial discharge.

Shall we give ergot in retained placenta? This is another practice which should be relegated to the past. Engelman says never give ergot until the uterine cavity is cleared. The contractility evoked by ergot is notably different from that which is peculiar to the uterus; it is a species of tetanic contractions which, when it affects the cervix, not only does not cause dilatation, but produces rigidity. Ergot may

then act directly opposite to the end desired, and by interfering with dilatation of the cervix shut up the uterine cavity. Hæmorrhage after miscarriage, even when we believe the placenta and membranes have been removed, invariably means retention of a part of the placenta or secundines. Profuse hæmorrhage may occur for weeks from this cause. In such cases we should boldly explore the uterine cavity and remove any offending matter that may be present. In the first twelve weeks of pregnancy the dangers from hæmorrhage and septicæmia are not so great, and the expectant plan is more justifiable. After the third month it is criminal negligence to wait and subject a woman to the dangers arising from retained placenta.

He showed an instrument improvised fifteen years ago by Dr. Thomas M Woodson, of Gallatin, Tenn. It is simply a wire doubled and twisted together, leaving an open space at the end, as the wire is brought back. This opening is about one-half to three-quarters of an inch wide and two inches long, and is then again bent to resemble a spoon. This is a good curette. In case of emergency it will answer every purpose.

Indigo as an Emenagogue—Dr. J. L. Jones, Bells.

Diabetes—Dr. J. A. Witherspoon, Columbia.

The following officers were elected :

President, Dr. J. W. Penn, Humboldt; *Vice-Presidents*, Drs. J. A. Witherspoon, Columbia; C. H. Lovelace, Duke-dom; and C. E. Ristine, Knoxville; *Secretary*, Dr. D. E. Nelson, Chattanooga; *Treasurer*, Dr. J. P. C. Walker, Dyersburg.

The next meeting will be held in Knoxville on the 2nd Tuesday in April, 1892.

ALABAMA STATE MEDICAL ASSOCIATION.

The Twenty-third Annual Session convened in Huntsville, April 14th, Dr. Wm. G. Sanders, of Mobile, President, in the chair.

After prayer, Jere Murphy, Esq., and Dr. R. M. Fletcher, of Madison, made addresses of welcome. Dr. Sanders next spoke nearly two hours, delivering his Annual Message as President.

Vice-Presidents Drs. Shirley Bragg, of Lownsboro', and W. C. Wheeler, of Huntsville, next submitted their annual reports with reference to the workings of the County So-

cieties during the year just ended. Dr. T. A. Means, of Montgomery, read his report as Secretary of the Association. The Treasurer's report showed a balance of over \$2,000 in hand.

At night the Association, with a large audience of ladies and gentlemen, assembled at the Opera House, where Dr. Edward P. Riggs, of Birmingham, delivered a masterly address to the public and profession. The remainder of the evening was given up to entertainment by music and recitations by ladies and gentlemen of the city.

During the second day Drs. Williams, of Chicago, and Reeves, of Chattanooga, were introduced and given the privileges of the floor.

Therapeutic Uses of Nitroglycerin and Nitrite of Amyl

Was the title of a paper by Dr. S. C. Carson, of Bessemer, Ala.. He makes full recognition of his indebtedness to the paper in the February number, 1891, of the *Virginia Medical Monthly*, by Dr. Jno. N. Upshur, of Richmond, for several of the most important facts named in his paper. To those addicted to promiscuously prescribing this powerful remedy, nitroglycerin, Dr. Carson interjects a caution that its capacity for harm when administered is only commensurate with its potent external manifestations. "It produces nausea, rapid, weak, dicrotic pulse, gastric pain, sometimes unconsciousness, lowering of temperature, complete revolution of the muscular system of animal life, dilatation of the retinal vessels. The feeble suffer more than the robust. Change in the pulse begins within six minutes, and lasts an hour. Motility is first impaired, then sensibility. It lessens sensibility to all forms of irritation, and diminishes the reflex functions. It impairs the muscular contractility. Death occurs from failure of respiration; the cerebral functions are only affected when the carbonic acid poisoning ensues. The hæmoglobin of the blood is damaged, impairing the oxygen carrying capacity of the red blood corpuscles, thus accounting for the fall in temperature. The color of the blood is a modified venus hue."—(Upshur).

As a very important avenue for obtaining information, he visited The Sterling Dynamite Company factory, at Bessemer, the largest in the South, where thousands of pounds of nitroglycerin, dynamite, black powder Bessemer powder, etc., are made and sold. He was permitted to see a "run," that is, the mixing of the acids and the glycerin, the nitroglycerin as it fell to the bottom, again as it was drawn off and washed

with soda, as it was worked up with the wood pulp, as it was made into "sticks" and loaded into boxes for shipment—in fact, all the minutia were entertainingly detailed. The acid used is in the proportion of three parts of nitric to four of muriatic. To about 1,500 pounds of acid, 214 pounds of glycerin are added, and the product is about 460 pounds of nitroglycerin. As an item bearing upon the danger attending the manufacture of these high explosives, the party who alone has charge of the making of the nitroglycerin is one of three survivors out of fourteen who commenced the process in Pennsylvania fifteen years ago—all the others having died violent deaths. Dr. Carson was informed that all employees suffered more or less in the beginning with headache, but gradually became tolerant of the poison—that the fumes from an explosion were more deleterious than those from the factory.

While the Doctor was sitting in his office—an upper room—several explosions of dynamite occurred in a sewer which was being excavated just below. He hurried to the door just in time to inhale the fumes as they were wafted upwards—in a very brief time—probably three or four minutes, he remarked to a companion that his head was throbbing from the effects of the smoke. Here was an involuntary experiment.

How do these nitrites act? Although differing widely in appearance, in stability and in the mode of administration, the effects—which are the result of "nitrous acid being set free in the blood"—are so similar as to readily proclaim their relationship. Their physiological action is to produce "an acceleration of the heart's action, sudden flushing of the face, dilatation of the arterioles in consequence of a paresis of the muscular layer of these vessels, sense of fulness of the brain, with tension and vertigo."—(Upshur). Bartholow says: "All the curative results obtained from nitroglycerin must be referred to its action upon the vascular apparatus." What action? Do they constrict as ergot, or do they relax and dilate?

Plainly, if there is "a paresis of the muscular layer," there is a relaxation; and clinical experience bears out this idea. This, Dr. Carson believes is the true mission of these nitrites, and however wide the range of their seeming applicability, their real merit is in diminishing the pressure of the arterioles, whether in temporary contraction, or in the more permanent condition produced by sclerosis.

It is evident, if there is such a thing as forcible dilata-

tion, the process *could* go to such an extreme from tonic contraction as to interfere seriously with the heart's action. According to a well authenticated law, "there is an inverse ratio between the general blood pressure and the rate of the pulse." Given a heart overwhelmed by pressure, taxed to its utmost capacity, slowed down to 40 or 50 per minute—then, in an instant, by active dilatation, allow the channels to become free, the arterial tone and systemic resistance to be destroyed, the rapid, violent, and excited condition of perhaps of a 150 ensues. Since we cannot deny this power of spasm and expansion to vessels, there must be a regulator to prevent the pendulum from running wild. This centre is by the best authorities located in the medulla. Probably these nitrites have their influence through this special centre. This theory is verified by practice. For instance, in what two affections will you more readily notice the satisfactory results of these remedies than in migraine (of a certain type), and angina pectoris? Quite different are they; and yet see the rational of the same remedy in each. "The slowing of the pulse during an attack of migraine is due probably to cerebral hyperæmia from relaxation of the vessels, or to the secondary anæmia and irritation of the medulla oblongata. This irritation of the medulla is also able to explain the other symptoms of vaso-motor disturbance during an attack of migraine; for instance, the small and contracted radical artery, and the extreme coldness of the feet and hands. Following this stage of irritation of the medulla with contraction of the vessels, comes one of exhaustion with relaxation."—(Pepper).

Under the head of angina pectoris, Pepper again says: "Various causes have been suggested to account for the seizures, prominent among which is a wide-spread contraction of the arterioles bringing a sudden strain upon the left ventricle of the heart. This theory is especially noteworthy because of the success which has attended the exhibition of nitrite of amyl which brings on a rapid vascular relaxation." "But in angina pectoris—true and pseudo—the achievements of nitrite of amyl are most marked—a few whiffs often bringing prompt relief in those emergent cases where great emergency of symptoms demands the most expeditious action. No agent finds its way into the system with such rapidity except prussic acid. But, though slower somewhat in action, nitroglycerin, even here, is more permanently beneficial."—(Upshur).

Nitrite of amyl should be administered by inhalation—

two, three, or five drops on a handkerchief gently wafted under the nostril of the patient. Nitroglycerin is given internally, either in the form of liquid nitroglycerin (1 grain in 100 minims of rectified spirits) dose from $\frac{1}{2}$ to 10 minims. Pil. nitroglycerin ($\frac{1}{100}$ to $\frac{1}{50}$ grain in cocoa butter) dose 1, 2 or more.

From an interesting little article in the January number of the *American Journal of Medical Sciences*, I quote the following on the subject of cardio-vascular vertigo. "It is a symptom of commencing arterio-sclerosis—a symptom of temporary disturbance of the circulation of the brain. There exists a sensation of pressure, dyspnœa on exertion, palpitation, præcordial anxiety, atony of the radial and temporal vessels. The most characteristic symptom is always the accentuation of the aortic second sound. The treatment consists principally in diminishing the tension of the vessel walls, and for this purpose iod. sodium and nitroglycerin are indicated. The first in doses of fifteen grains daily, the second in doses of four drops of 1 per cent. solution twice daily, as very valuable for diminishing blood pressure."

Some five years ago while practicing in the "black belt," Dr. Carson was taxed with a number of intermittents, accompanied by convulsions. On several occasions he realized the happiest results from a few drops of nitrite of amyl. There is a fall of temperature in some cases of several degrees following its administration. Often of late he has seen the same remedy highly extolled in chronic hiccough, but he has no personal knowledge in regard to it.

In both acute and chronic Bright's disease, nitroglycerin serves a good purpose by relieving vascular tension. Nitrite of amyl increases the flow of urine similar to alcohol.

It is curious to note the exact similarity between the effects of nitroglycerin internally, and the inhalation of the fumes of dynamite. On this point a most attractive article by Dr. Thomas Darlington can be found in the December number of the *New York Medical Record*. From 1885 to 1887, while Surgeon to the New Croton Aqueduct, 1,300 cases of asphyxia or partial asphyxia and poisoning from the products of the explosion of dynamite, came under his care. According to his idea the products of the combustion are water, carbonic acid gas, and nitrogen dioxide. He says: "The similarity of symptoms from inhalation of the products of the explosion of dynamite and of those produced by nitro-glycerin itself, is so well marked as to be no-

ticed by the miners themselves. No other conclusion can be reached than that there is mixed with the gases produced, unexploded particles of nitroglycerin in a volatile state, and these particles inhaled by the miners produced the effects described.

As regards treatment, of course, such measures as are generally used in cases of asphyxia, are of service. But in addition to these, the use of cold to the head, and of atropine, ergotine, or other vaso-motor stimulants administered subcutaneously, are of necessity indicated and exceedingly efficacious. There is little doubt that the effects of nitroglycerin are produced from the decomposition and the formation of a nitrite in the body. Acting on this principle, and from its stimulant properties, Dr. Thomas has uniformly treated his cases with inhalation of ammonia, and has also given the carbonate and aromatic spirits of ammonia, internally, and up to the present time he has never lost a case."

Upon what principle or in what manner do these agents control pain? All are agreed that they *do* relieve the fulminant pains of angina; some assert the same as to neuralgia of the fifth pair, of muscular spasm of the stomach, of renal and hepatic colic, of hour-glass contraction of the uterus. If pain is simply "a cry of the nerve for food" and nerve-food is the pabulum of the blood, then probably the question is solved on the ground that more blood—consequently more food—is allowed to reach the part affected. Dr. Carson thinks it more probable though that they paralyze the nerves and destroy the reflexes. On the other hand, how often during the first quarter of this century have all pains which "flesh is heir to" been dissipated—like the dew before the sun—by a heroic resort to venesection? Cannot a relationship be established between the two methods? He leaves this interesting theme to others.

Dr. Michel read for Dr. L. L. Hill, of Montgomery (unavoidably absent), a paper on "Modern Treatment of Wounds." Dr. Charles A. Mohr, of Mobile, read an able but lengthy paper on "The Chemistry and Relative Value of Antiseptics and Disinfectants." Dr. James T. Searcy, of Tuscaloosa, read a paper on "The Relation of Alcohol to Crime."

During the third day miscellaneous and unfinished business was attended to, and the "omnibus discussion" was had. At 2 P. M. the Doctors were conveyed in hacks to Hotel Monte Sans, where a banquet was tendered and enjoyed.

During the fourth day, the resolution to admit eclectics and homœopaths to membership failed to pass.

Then the election of officers for the ensuing year resulted as follows: *President*, Dr. Benjamin J. Baldwin, of Montgomery; *Vice-Presidents*, Drs. W. C. Wheeler, of Huntsville, and J. Huggins, of Newberne; *Orator* for 1892, Dr. B. Leon Wyman, of Birmingham. *Montgomery*, second Tuesday of April, 1892, were selected as the place and time of holding the thirty-fourth annual session.

FLORIDA STATE MEDICAL SOCIETY.

The Eighteenth Annual Session was held in Pensacola, Fla., April 14th, 15th, and 16th, 1891.

On the morning of the first day, the Society was called to order by the Chairman of the Local Committee of Arrangements, Dr. J. Harris Pierpont. After prayer, Dr. F. G. Renshaw, of Pensacola, welcomed the Society to the city. Then the President, Dr. Thomas P. Gary, of Ocala, assumed the chair.

After the report of the Committee on Credentials, reports were received from the several District Medical Examining Boards (except the Second and Sixth), showing that very creditable work had been done by them. Then the President's Annual Address was delivered by Dr. Gary.

During the afternoon session, Dr. J. F. McKinstry, of Gainesville, read a paper on "Medicine and Medical Men."

Dr. R. P. Daniel, of Jacksonville, read a paper entitled "The Leprosy Problem," which was deemed of enough interest to be referred to the Chairman of the Section on Medicine, who will formulate a report upon the suggestions contained in the paper, to be acted on during the annual session of 1892.

Dr. S. Stringer, of Brookville, in a paper entitled "New Treatment in the Operation for Vesico-Vaginal Fistula," described a new instrument deemed of service in the operation.

A paper by Dr. R. B. S. Hargis, of Pensacola, was read by Dr. W. E. Anderson, as Dr. Hargis was unable to be present.

D. Frank H. Caldwell, of Sanford, next read a very instructive paper on "The Therapeutic Value of Oxygen."

Dr. J. C. Neal, of Lake City, read a paper on "Legalized Crime in Florida," showing the enormity of the ignorance

of many of the "females who follow the practice of midwifery strictly as such" under the laws of Florida. Details of horror in the lying-in room are given, showing that human lives are most ignorantly lost each year by allowing such parties to practice midwifery. The paper winds up in a strong appeal that the Florida Society should take some step looking to protection of the child-bearing woman. "How absurd it is to compel all recent graduates * * * to stand examinations, and pay for them; and then they must compete in practice with some old 'granny' or black 'nurse,' *totally* ignorant of knowledge of anatomy, surgery, or hygiene, and she exempt by law from tax, restraint, or examination!" Surely this is legalized crime.

During the night's session, papers were read by Dr. Solace Mitchell on "Cases Treated by Koch's Lymph." and by Dr. Thomas P. Gary, of Ocala, on "Animal Alkaloids."

The election of officers resulted as follows: Dr. Thomas P. Gary, of Ocala, was unanimously re-elected *President*; Drs. J. Harris Pierpont, of Pensacola, and J. M. Jackson, of Bronson, *Vice-Presidents*; Dr. J. D. Fernandez, of Jacksonville, *Secretary*; Dr. DeWitt Webb, of St. Augustine, *Orator* for 1892; Dr. J. H. Douglas, of Jacksonville, *Librarian*; Dr. ——— Porter, of Key West, *Chairman of Local Committee of Arrangements* next year. *Key West* was selected as the place of meeting between the 1st and 15th of April, 1892.

After adjournment, a supper and a pink ball were the amusements for the night. Next morning the Doctors, with their ladies, were taken out on a boat to various points of interest about the harbor, etc.

Analyses, Selections, etc.

Comparison of the Ocular Troubles in Locomotor Ataxia, Multiple Sclerosis, and Hysteria.

In a clinical lecture at the Saltpetriere, Charcot considered comparatively the ocular troubles occurring in the tubes. Multiple sclerosis and hysteria.

Amblyopia, with pearly white degeneration of the papilla, is often the first symptom of locomotor ataxia, even preceding motor inco-ordination, the diminution of the reflexes, the lightning pains, by many years.

Nystagmus, when not hereditary, has a symptomatic

value almost as great in the diagnosis of disseminated sclerosis.

In tabes, paralysis of the motor muscles of the globe of the eye are very frequent, especially paralysis of the muscles innervated by the *motores oculorum*. When in the presence of the diplopia proper to paralysis of the third pair, one should always have in mind the probability of tabes. Paralysis of the abducens has also been witnessed in tabes, but very rarely.

In disseminated sclerosis, it is the abducens which is attacked in preference; paralysis of the *motores oculorum* is much less frequently seen.

Hysteria may sometimes engender strabismus by paralysis or by spasms; it may give rise to associated paralysis, but never to nystagmus. In hysteria, there is also the lid-drop, and the ptosis is due not to paralysis of the levator muscle, but to spasm of the orbicularis. We find, moreover, in hysteria, a symptom not met with in any other affection—viz: monocular diplopia, so well studied by Parinaud. Diplopia is generally binocular, and is due to paralysis of the third pair or of the abducens.

The condition of the pupils in locomotor ataxia is peculiar; they are generally contracted. This is especially noticeable in patients who have blue eyes. Sometimes the pupils are unequal; one is moderately dilated, the other is small. This inequality of the pupils is only seen in two diseases—general paralysis and locomotor ataxia. There is another sign equally common to these two affections—that is, what is designated under the name of the Argyle-Robertson pupil. If near to one of these pupils when moderately dilated you hold a light, the pupil does not contract; if you place the patient in a dark room, you will observe that the pupils fail to dilate. The pupils do not contract under the influence of light, while under the influence of efforts of accommodation they react as in the normal state.

Nothing of this kind is observed in multiple sclerosis. Generally in this affection there is nothing special to remark in reference to the pupil.

In tabes, one may frequently witness sclerosis of the optic nerve; the ophthalmoscopic observation is like an autopsy on the living subject. The retinal vessels are seen to be small and atrophied; the nerve has a pearly-pale, anæmic aspect (nacreous papilla); these appearances are always of unfavorable augury, and the patient who presents them

will be surely tabetic and blind in the course of a year or two.

In multiple sclerosis, there may be lesions of the fundus oculi, but both eyes are not irretrievably affected, and the amblyopia lasts only four or five months; at the end of that time, there is always an amelioration. Ulthoff, out of one hundred cases, noticed but one case of blindness. In this form of sclerosis, the contours of the papilla are less sharp than in the normal state; there is a sort of cloudy exudation; the vessels are atrophied; the general aspect is that of a dull, yellowish-white in extreme cases.

In hysteria, there may be amblyopia, even complete amaurosis, but the modifications of the papilla noted in sclerosis are never witnessed; the functional troubles may be very pronounced, but are sure to disappear. Hysteria almost always causes a contraction of the visual field, which is concentric instead of being irregular, as is the case in locomotor ataxia. In the latter disease, the campimetric image presents notches and indentations; at the same time there supervenes a dyschromatopsia which has quite peculiar characters. An individual who is not affected with congenital Daltonism will affirm that the pantaloons of the foot-soldiers appear to him black; the trees, instead of being green, are to him a grayish-black color; at the same time vision for yellow and blue is still perfectly good. By and by the vision for yellow and blue ceases in its turn, the visual field contracts more and more, till the white itself is no longer perceived.

In hysteria, dyschromatopsia is much less frequent than in tabes, and when it does exist, the colors do not disappear in the same order. It is first the blue which is no longer perceived, then the yellow, then the other colors successively, with the exception of red, which persists alone during a very long time.

In disseminated sclerosis, there is nothing to note respecting the visual field or the perception of colors.—*Times and Register*, April 11, 1891.

Hydrastinine in Uterine Hæmorrhage.

Falks (*Centralblatt f. Gyn.*, No. 8, 1891). The author declares *hydrastin* a cardiac poison, while hydrastinine, the oxydation product of *hydrastine*, he says, does not affect the heart injuriously. The latter deserves the preference for therapeutic use. Used hypodermically, hydrastinine causes no irritation and is less painful than ergotine. F. regards

it as an active and reliable hæmostatic. It has proved particularly valuable in the treatment of hyperplastic endometritis, congestive dysmenorrhœa, hæmorrhage of the virgin uterus and in that attending uterine myomata. He recommends its use before the menstrual period as a prophylactic against menorrhage. It is best given hypodermically in an aqueous solution of the muriate. The dose is three-quarters of a grain. The drug will undoubtedly be found of service, too, in the hæmorrhages of obstetric practice.—*Brooklyn Med. Jour.*, May, 1891.

The Dangers of Cocaine.

The rapid accumulation of cases in which alarming symptoms followed the local application of small quantities of cocaine, together with the fact that these untoward effects are due to individual idiosyncrasy, and do not invariably occur immediately, is a positive warning to the profession that this powerful substance should not be used in any case for the first time without proper antidotes directly at hand and the patient kept under surveillance for at least a half hour. We will not attempt to refer to the cases published, in which ordinary therapeutic doses administered internally or subcutaneously caused symptoms similarly embarrassing.

Nearly three years ago, Satterwhite, as a result of a study of one hundred cases of poisoning by this alkaloid, called attention to the dangers attending the use of even very small doses, and at about the same time another author, after summarizing the records of fifty cases, made a similar announcement. That this warning was well founded is evident by succeeding publications. A case is reported by Broughton, in which unconsciousness; an irregular, slow respiration; and a slow pulse, followed the application of three minims of a 20 per cent. solution within the cavity of a tooth. Whistler, after the application of a 4 per cent. solution to the nasal cavity, noted vertigo and threatening syncope. In a case of glossitis, Ricket states, that the patient became moribund after the use of a similar solution. Myrtyle dropped three minims of a 3 per cent. solution in each eye, which immediately caused a sense of numbness in the back of the tongue and throat, palpitation, threatened syncope, and nausea. Bettelheim records that in one case the hypodermatic injection of one-sixth of a grain induced alarming symptoms; and, in another, one-eighth of

a grain similarly injected caused unconsciousness, congestion of the face, irregular breathing, and trismus. Cotter found unpleasant symptoms in more than one instance while using in the nasal cavities a solution as weak as 10 per cent. Thus, in a young lady there was sprayed into these fossæ six or seven minims of a 10 per cent. solution, and just as he was going to operate the breathing became very difficult, the larynx seemed paralyzed, distressing symptoms of cardiac and general depression appeared, and she was unable to walk for two hours. Hübner dropped about one and a half minims of a 2 per cent. solution into the nostrils of a healthy young soldier previous to the removal of a polypus. This was soon followed by unconsciousness, an exceedingly weak pulse, and cold skin. A case is reported by Ficano of a woman, 43 years of age, who had for some time suffered from intolerable tinnitus, which accompanied a dry otitis media, with a diminution of hearing. A few drops of a 5 per cent. solution were introduced into the middle ear by means of a catheter, after the use of the Politzer method of insufflation. In a short time vomiting came on with cramps and diarrhœa, which lasted for several hours; there was marked muscular inco-ordination and symptoms generally analogous to those of sea-sickness.

There seems to be no doubt that cocaine is absorbed with extraordinary rapidity, and that the stronger the solution which is locally applied the greater the danger of toxic symptoms, but whether the latter are to be attributed merely to the larger dose, or to some obscure action, is not apparent. Falk has found that the rapidity of absorption varies in the different tissues—absorption taking place most rapidly through the conjunctiva, then, in the following order: nose, larynx, mouth, and ear. It is generally conceded that a 10 per cent. solution is sufficiently strong for most purposes and robbed of many of the dangers of those of greater strength.

The nature of the toxæmic symptoms varies so greatly that no rule-o'-thumb treatment can be set down; in some cases nervous and muscular excitement predominates; in others, respiration in the function most seriously affected; in others, the circulation, etc. Among the agents found useful are nitrite of amyl, strychnine, atropine, morphine, alcohol, ammonia, digitalis, chloral, sinipisms over the heart and stomach, hot drinks, and artificial respiration.—*Med. & Surg. Rep.*, May 2nd, 1891.

Graves' Disease.

Dr. Hingston Fox read a paper on this disease, especially with reference to the cardiac condition. After speaking of the four cardinal symptoms—namely, rapid heart, tremor, goitre, and exophthalmus—any one or two of which may be absent in an undeveloped case, he dwelt on the mental condition found in severe cases. The emotional centres seem to be in unstable equilibrium, disturbed by slight influences, a condition allied to hysteria and to the effects of chronic alcoholism in women about the climacteric. Muscular weakness and impaired nutrition, with neuralgia and the well-known eye symptoms were noted. Severe gastric crises had attended one case, the patient nearly dying from the vomiting, diarrhœa, etc., which appeared to be the effects of “bowel hurry.” Dr. Hunter McKenzie’s theory of the pathology of the disease was adopted, the symptom being regarded as an expression of a permanent condition of the emotional nervous centres, set up in the first instance by terror or fright. Darwin’s graphic description of the effects of sudden fear upon animals was alluded to, the thyroid enlargement being the only important symptom of Graves’ disease which is there unrepresented. The fright may have been sudden, or a repetition of small shocks. Instances were quoted in illustration of this. This theory brings us, of course, only one step nearer to the true pathology, as regards the heart; beyond a hæmic murmur and eventually dilatation, there is not usually any sign of disorder except the rapid and irregular action. Some cases show tachycardia, others mainly irregularity; in some the condition is continuous, in others paroxysmal. The graphic record of one severe case in a lady, aged 49 years, was shown, extending over eight months. Her attacks of irregular and rapid heart action occurred at intervals of a few days or a week, and lasted twenty-four hours or so. For treatment numerous remedies have been advocated. The author would lay stress on (1) moral and hygienic care in its widest sense; (2) improvement of nutrition, much milk, cod-liver oil, iron; (3) of drugs, belladonna in mild and early cases; iodides in later stages, pushed fearlessly to large doses; bromides in some cases; (4) locally the weak continuous current, following Dr. Samson in persevering long with its use—it should be applied to the thyroid with a large plate. Lister’s cold coil also gives some promise; (5) for tracheal obstruction, tracheotomy, incision of capsule of tumor, or compression

laterally in some cases, inhalation of chloroform, or lastly, division of the isthmus offers the best hope of relief.—*Med. Press, April 22.*

Points in Specific Medication.

Tincture of guaiac is a specific for *tonsillitis*, when we have great swelling with humidity and deep redness of tonsillar mucous membrane. The dose is only a fraction of a drop, and still one dose of the medicine will give relief. Upon the first appearance of that characteristic stiffness and pricking sensation in the throat, immediately stop its progress by a dose or two.

Penthorum sedoides is the remedy for spring colds with a stuffing up of the nostrils and cold in the head, with profuse nasal secretion; in other words, coryza, with fullness of mucous membranes, abundant secretion, spongy gums, and the conditions so commonly called catarrh among the laity. Internally it should be given in doses of ten drops to four ounces of water, teaspoonful every two hours, and also used as a spray diluted with water.

Calendula has been attracting some attention lately, and perhaps some new indications for its use may appear. *Calendula* is the remedy for varicose veins, especially of the lower extremities. When we have varicose ulcers on the leg, we must first heal the sore; and by bathing the limb with calendula, also giving it internally, the rubber bandage will complete the cure.

There is no chronic disease which is commonly more intractable to medical treatment than locomotor ataxia; hence the many remedies, including suspension and galvanism, which have been recommended for it. Still, under the specific indications for drugs no disease has yielded more satisfactory results than this same *locomotor ataxia*. Every one knows the pathological conditions in this disease—increase of capillary circulation, over-nourishment, with resulting hyperplasia and contraction of connective tissue, supplanting normal nerve-fibres in the columns of Burdach and Gall. The administration of *ergot* has given surprising relief in these cases. Sometimes it is necessary to remove indications by iodide of potash first, on account of syphilitic infection, or perhaps there may be an indication for the salicylates. But *ergot* is the remedy when we have the indication.

Another chronic condition which is speedily and surely dissipated by straight medication is *enlargement of the thy-*

roid gland. We speak what we know when we say, give *iris*—but not the common, every-day preparations which are usually kept in the drugstores. Tincture or fluid extract made from the dried root has about the same virtue as a tincture of wooden tooth-picks. The *specific tincture* is what we must use. When we have enlarged thyroid, with anæmic and atonic conditions, especially in young girls just entering maturity, give *iris*—ten drops to four ounces of water. Dose, teaspoonful four times a day.

Another chronic disease which has responded very satisfactorily to specific treatment is *vaginal leucorrhœa in young girls otherwise robust.* In such cases vaginal examinations are not to be made. Injections are also very mortifying to the delicate, shrinking nature of the highly sensitive patient. You will be, perhaps, surprised and gratified beyond measure with the promptness with which *helonias* will *relieve the symptom.* Helonias acts by increasing the tone of the relaxed and secreting vaginal mucous membrane

A condition which will be removed by small doses of *ignatia* is *feminine sexual frigidity.* Do not let your sense of the ridiculous entirely overcome you; but just give the remedy a trial in cases where there are no morbid variations, and nothing in the way but feminine frigidity.—*Eclec. Med. Jour.—Med. World, May, 1891.*

Fracture of the Ischium During Parturition.

At a meeting of the San Diego Medical Society, September, 1890, Dr. T. A. Davis reported a case of this rare injury. Separation of the pubic bones and fracture of the coccyx are injuries occurring during the progress of parturition with which our surgical works are well supplied with examples; but fracture of the ischium is of such rare occurrence, and the examples recorded so few, that the relating of a case, and the obscurity with which the diagnosis was necessarily enshrouded, cannot but be of interest to the profession. The rarity, at least, of its recognized existence may be appreciated from the fact that careful research through surgical literature within his reach revealed but three recorded cases. In two of these cases the location of the line of fracture or its extent has not been pointed out. Hamilton, in his work on "Fractures," records Marat's case; Stimson records a case from Malgaigne; the third is reported by Agnew from the surgical wards of the Pennsylvania Hospital. The case of which this paper is the subject—Mrs. M. B., aged 31 years, of slender build and

anæmic—was visited twelve days after confinement, in June, 1890. The patient was then suffering with laceration of the perineum and symptoms of crural phlebitis, with the usual constitutional disturbances that accompany such conditions. The perineal laceration had been repaired with catgut immediately after delivery, but the sutures had all given way. The patient complained of severe pains at the perineum, also above and back of the pubis and at the knee, with a feeling, when changing position in the bed, of something moving within the pelvic cavity. The anxiety not to disturb the parts, on account of the laceration, prevented a thorough examination; but, as the pain and sensation of moving persisted after union had taken place in the perineum, an examination was made. On vaginal exploration, the finger detected a slight irregularity at the junction of the ischio-pubic rami. Directing the finger backward, a second line of fracture through the body of the ischium to the lesser ischiatic notch was discovered. By grasping the tuberosity externally and causing motion, the finger within, upon the lines of fracture, detected an equal amount of motion, and left no question of the existence of the fracture and its extent, as above described. The fracture was simple, without complication of the adjacent soft parts. The patient did not complain of pain at the seat of the fracture, but attributed all the pain that was connected with the fracture to a location immediately internal to the pubic region and at the knee. There is no doubt that much of the pain which accompanied the crural phlebitis in an unusual degree, and the inordinate tendency to flexion of the leg on the thigh, were due to the direct irritation of the fracture. A bandage of thick canvas was secured around the hips and upper third of the thighs, and the knees were kept flexed. When resting on the back, a rubber-ring air-bag was so placed as to prevent pressure upon the tuberosity of the ischium. The patient remained in bed for eight weeks, when she was allowed to occupy a chair for a few days. On the sixty-seventh day after confinement she was able to walk about the room with care. Like the previous cases of record, this accident occurred during instrumental delivery. This was the second child. An attack of milk-leg followed her first confinement. It has been a question in my mind whether or not an undiscovered fracture then existed, as an additional complication (retention of urine) occurred after the first and was absent after the last confinement.—*Satellite*, April, 1891.

Ocular Signs as Aids to Diagnosis.

Dr. E. Oliver Belt, of Washington, D. C., has so valuable a paper on this subject (in *Med. News*, May 2nd,) that we reproduce it almost in full. He says that Dr. Rosse, in a paper on "Cerebroscopy,"—"diagnosing cerebro-spinal disease by studying the alterations of the eye"—says: "This new science, though still incomplete, has done so much to advance the diagnosis of nervous diseases that the advocates of cerebroscopy place it in the first rank of the methods of exploration employed by physicians, and remarks, without exaggeration, that it is for diseases of the brain and spinal cord what auscultation and percussion are for diseases of the chest; for it is now quite possible by this method to see in the eye what is taking place in the brain."

Beginning with indications afforded by the conjunctiva and lids, we need no better evidence of hepatic derangement than the *icterode conjunctiva*, nor of anæmia than the *pallid mucous lining of the lids*. *Phlyctenular diseases of the conjunctiva and cornea* are indications of lowered vitality and a strumous condition. *Edema of the lids*, unaccompanied by inflammation of the eyeball, points to diseases of the heart or kidneys; this condition, however, may result from the use of certain drugs, as arsenic, it being frequently the first intimation of poisoning by that drug. It is also a useful guide in the therapeutic administration of arsenic. A *succession of styes* denotes a lowered condition of the general health, or derangement of the stomach or reproductive organs. *Marginal blepharitis* also indicates lowered health or an error of refraction. *Protruding eyeballs*, a rapid heart, and enlarged thyroid gland are familiar symptoms of Graves' disease.

The chief diagnostic sign given us by the cornea is *interstitial keratitis*. As a result of syphilis, Nettleship says: "That diffuse, chronic keratitis, affecting both eyes of children and adolescents, is, when well characterized, almost invariably the result of hereditary syphilis, is proved by abundant evidence." As a rule, the characteristic Hutchinson teeth are seen with this condition. In the old we sometimes notice *painless ulceration of the cornea*, which signifies a lesion of the fifth nerve. *Arcus senilis* is often an accompaniment of fatty heart, and an indication of fatty degeneration of other tissues of the body. The iris frequently gives us indications of unsuspected syphilis, and premonition of gout and rheumatism for weeks before there are other manifestations of these diseases. About 70 per cent.

of the cases of *iritis* are due to syphilis. It usually affects both eyes, which is an important fact to remember, as *unilateral iritis* is generally due to rheumatism, which causes about 15 per cent. of all cases. A *gumma of the iris* is a positive indication of syphilis.

Nettleship says: "*Reflex iridoplegia* (the Argyll-Robertson pupil) is one of the most valuable of the early signs of locomotor ataxy." *Inequality of the pupils* seems to be very frequently a precursor of insanity. Aside from dilatation caused by paralysis of the third pair of nerves and the local influence of mydriatics, according to Meyer and other authorities, the *pupils are found dilated* in hysteria, in hypochondria, in the later stages of meningitis, in hydrocephalus, etc. *Sudden dilatation* of the pupils during the administration of chloroform is a very important danger-signal.

Contraction of the pupils, according to Swanzy, is found in the early stages at least of all inflammatory affections of the brain and its meninges, in tobacco amblyopia, at the beginning of an hysterical or of an epileptic attack, in the early stages of intra-craneal tumors situated at the origin of the third nerve, or in its course. In cerebral apoplexy the pupil is at first contracted, according to Berthold, who points out that this contraction is a diagnostic sign between apoplexy and embolism, in which latter the pupil is unaltered. In lesions above the dorsal vertebræ *myosis* occurs. Some authorities regard myosis as one of the earliest signs of tabes, while others do not. In acute mania the *pupil is usually much dilated*, and when this *mydriasis is changed for myosis*, approaching general paralysis may be prognosticated.

The *pupils are dilated* in poisoning by strychnia, ergot, belladonna, stramonium, hyoscyamus, duboisia, cocaine, and aconite, and are contracted by lethal doses of opium, jaborandi, physostigma, tobacco, etc. *Loss of accommodation*, with or without dilatation of the pupils, frequently follows diphtheria, and may be the only positive evidence that the sore throat was diphtheritic. *Changes in the lens* are sometimes of diagnostic value, as rapidly-forming cataracts in persons of middle age are indications of diabetes mellitus. *Muscae volitantes* generally indicate disordered digestion, but this affection is not to be confounded with floating bodies due to changes in the lens, vitreous, and choroid, which are generally of a serious nature.

Among the indications revealed by the ophthalmoscope, we may mention *symmetrical disseminated choroiditis*, with

opacities in the vitreous, as being almost pathognomonic of syphilis. In this affection the retina is often involved with the choroid. But the retina gives us useful indications in a number of other affections. Notably, in Bright's disease *impaired vision* is often the only marked symptom. According to Wells, disease of the kidney may be unknown and unsuspected until the ophthalmoscope reveals the presence of the characteristic albuminuric retinitis. During the latter months of pregnancy, *amblyopia* may be the first symptom intimating the probability of albuminuria. *Blindness following delivery* is more often from loss of blood.

Idiopathic retinal hæmorrhages are of decided significance, especially in the old, where they are often precursors of cerebral apoplexy. In illustration, a prominent physician of the South, about eighty years of age, but in apparently excellent health, had been awaiting patiently the maturation of a cataract; suddenly vision in one eye was reduced to perception of light, and concluding that the cataract was mature, he came on to have it removed by Professor Chisholm. Instead of finding an opaque lens, however, we found extensive hæmorrhages into the vitreous. In less than a week after returning to his home he died suddenly in his office of apoplexy.

Retinal hemorrhages are not unfrequently seen in organic disease of the heart, and sometimes they result from menstrual suppression. In the absence of glaucoma, when pulsation of the retinal arteries is observed, we might suspect insufficiency of the aortic valves, aneurism of the aorta, Graves' disease, or chlorosis. *Amblyopia* in certain cases may lead us to suspect tobacco-poisoning, especially if accompanied by central scotoma for red. *Optic-nerve atrophy* is often the first intimation of locomotor ataxy.

Optic neuritis, loss of sight in portions of the field, and paralysis of certain ocular muscles, frequently give us such aids as to enable us to diagnose with comparative certainty not only the presence, but often the location of cerebral lesions. According to Gowers, neuritis is present at some period in at least four-fifths of the cases of tumor of the brain. He says the value of optic neuritis as an indication of the existence of an intra-cranial tumor is very great, and that it may be the only unequivocal sign of the intra-cranial disease. Nettleship says: "Although pointing very strongly to organic disease within the skull, neuritis is not of itself either a localizing or differentiating symptom." In conjunction, however, with other symptoms that are fre-

quently present, it is of much value in localization. Neuritis limited only to one eye, generally indicates disease of the orbit. Loss of half the field of vision (hemioptia) is one of the most important aids in the localization of cerebral lesions. When binocular, it indicates disease at or behind the optic chiasma. In the majority of cases the hemioptia is homonymous—that is, the right or left lateral half of each field is lost. Loss of the right half of each field points to disease of the left optic track, or of some part of the left occipital lobe, or in the fibres connecting these parts. *Temporal hemioptia* points to disease at the anterior part of the chiasma. When lateral hemioptia co-exists with hemiplegia, the loss of sight is on the paralyzed side. Swanzy says: "We may conclude that the hemioptia depends upon occipital lesion, if it be unaccompanied by hemiplegia, motor aphasia, or paralysis of cerebral nerves;" also, that contraction of the pupil in a case of hemioptia, when the light is thrown on the blind half of the retina, indicates that the lesion causing blindness is back of the corpora quadrigemina. The absence of this reaction indicates that this lesion involves the corpora quadrigemina or the optic tract. Sometimes there is incomplete hemioptia—that is, only one quadrant of the field of vision is affected. Hun reports a case of this kind in which the left lower quadrant in each field was blind, and where the autopsy showed a lesion strictly limited to the lower half of the right cuneus. Remember the fact that loss of a certain half of the *field* means loss of function of the opposite half of the *retina*.

Paralysis of the ocular muscles also aids in locating cerebral disease. Complete paralysis of the third nerve, without any other paralysis, is almost always due to lesion at the base of the brain, on the same side. Hemiplegia of one side, coming on simultaneously with paralysis of the third nerve of the opposite side, is a common sign of disease of the crus cerebri. When paralysis of the third nerve occurs, with hemiplegia of the opposite side of the body and other cerebral symptoms, it is usually due to pressure on the nerve where it runs beneath the cerebral peduncle. According to Nothnagel, this localization is still more certain when paralysis of the facial and hypoglossal nerves exist on the same side as the hemiplegia.

Paralysis of the sixth nerve, according to Swanzy, simultaneous in its onset with hemiplegia of the opposite side of the body, indicates a lesion of the pons, usually a hæmorrhage on the side corresponding to the paralyzed nerve.

By itself *paralysis of the abducens* is of little value in the localization of cerebral disease, from the fact that it is so often of peripheral origin.

Treatment of Rhus Poisoning with Ipecac.

Dr. W. S. Gilmore, of Sorgho, Ky. (in *Country Doctor*), recommends the following with confidence, having used it for six years without a failure:

R. Ipecac pulv ʒ. iij
Aqua Oj

M. Sig.—Apply freely to the affected part every two hours.

The heat, itching, and pain are relieved as if by magic, and in the great majority of cases two or three applications are sufficient to produce a cure. The only difficulty that has been noticed is a slight cooking or blistering of the skin when the solution was too strong. That, however, is easily obviated, as the weaker solutions seem as efficient as the stronger. He thinks it as near a specific as we have in medicine.

Menthol for Uncontrollable Vomiting of Pregnancy.

Drs. Henske and Gottschalk have found menthol efficacious in stopping the uncontrollable vomiting in pregnancy. Fifteen grains are dissolved in five ounces of distilled water, to which five drachms of rectified spirits are added. A tablespoonful of this mixture is given hourly till the vomiting ceases. The editor of the *Archives of Gynecology* states that he had an opportunity of trying the efficacy of this mixture. Vomiting ceased after the fourth tablespoonful. Dr. Gottschalk reports two cases with similar results.—*British Med. Journal*, Nov. 1.

Antikamnia in la Grippe.

Dr. Thos. Hunt Stucky, Professor of Surgical Pathology and Clinical Surgery in the Hospital College of Medicine, Louisville, says that he is "using Antikamnia daily with most gratifying and satisfactory results; and adds: "It is 'the thing' in la grippe."

The uncertain strength of Coca leaves make this drug very unreliable unless a preparation is used which we *know* to be made from a good leaf. "Robinson's Wine Coca" is prepared by percolating *assayed* Coca Leaves with Malaga Wine, and has always been found entirely satisfactory.

Book Notices.

Heredity, Health, and Personal Beauty. By JOHN V. SHOEMAKER, A. M., M. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia, etc. Philadelphia and London: F. A. Davis, Publisher. 1890. 8vo. Pp. 422. Cloth, \$2.50. (From Publisher.)

This is a sort of "go-between" book—alike interesting to the laity and profession. It is divided into thirty-seven chapters, besides an "Introduction" of twelve pages. The first dozen or so chapters are filled with pleasant, popular reading, on such subjects as the "general laws of health," "the regulative law of life and growth," "nature's evidence of such laws," "man's spiritual place," "phenomena of evolution," "sentiment of the beautiful," "source of beauty of the fair sex," "grace, the crown of beauty," etc. Most of the book, after such chapters, gives useful reminders to the professional reader, and instruction to the layman. Some of the practical chapters for the physician to read are those on the cosmetic care and treatment of the face, the hands, the feet, nails, hair, etc. A great number of excellent formulæ are scattered throughout all such chapters. An unfortunate omission from such a book as this is the lack of an index, which we hope the author will see the propriety of inserting in any subsequent edition that may be called for. The book contains too many odds and ends of information for the doctor to be without an index to enable him to find the information he desires when needed.

Principles of Surgery. By N. SENN, M. D., Ph. D., of Milwaukee, Wis., Professor Principles of Surgery and Surgical Pathology in Rush Medical College; Professor of Surgery in the Chicago Polyclinic, etc. Illustrated with 169 Wood Engravings. Philadelphia and London: F. A. Davis, Publisher. 1890. 8vo. Pp. 611. Cloth, \$4 50. (From Publisher.)

The author has selected the correct title for this book. It re-bridges a gap caused by the decay of the old timbers which formed the fundamental principles of surgery until recently. "The recent great discoveries," as Dr. Senn puts it, "relating to the etiology and pathology of surgical diseases have made the text-books of only a few years ago old and almost worthless." The idea of the author is that if

the student acquires a thorough knowledge of the causation, pathology, diagnosis and prognosis of injuries, etc.—the *principles of surgery*, in short—he will have no difficulty in applying his knowledge of the principles of treatment to surgical cases; but it is just here that Dr. Senn is mistaken, so far as the beginner is concerned. The beginner wants to know something more of the details of operation in given cases than this book gives. Then, too, Dr. Senn apparently assumes it as a fixed fact that the doctrines of bacteriology regarding such diseases as hydrophobia, etc., will last forever; yet he asserts that “the microbe of hydrophobia exists, *but so far it has not been discovered.*” Many eminent in surgery, in bacteriology, in general practice, deny the prevalence of any such specific disease in man; and undoubtedly there is much evidence to prove that there have been many fanciful cases published, and that fright has been due solely to the imaginative pictures drawn. There is strong reason to believe that fewer deaths from so-called hydrophobia would now be recorded were the impressionable element of strongly impressionable people let alone or composed by advice and sedatives. Instead of being a book for beginners, it is the book for established practitioners who have experience as to the details of operation.

Koch's Remedy in Relation Specially to Throat Consumption. By LENNOX BROWNE, F. R. C. S., Ed. Senior Surgeon to Central London Throat, Nose, and Ear Hospital, etc. *Illustrated by 30 Cases and 50 Original Engravings and Diagrams.* Philadelphia: Lea Brothers & Co. 1890. Cloth. 8vo. Pp. 114. (From Publishers.)

The records, as here given, lead the author strongly to favor the use of Koch's lymph in those forms of tuberculosis that are externally local, as in the throat; but Mr. Browne's work was published in London during January—before he had time to observe the after-results of treatment. Still for those who are disposed to adopt the “Koch treatment” this is the best of the monographs on the subject, as it gives in detail every minutia for instruction and caution necessary for the practitioner. The author's experience would lead the student to hold up for awhile longer any totally adverse opinion as to the real merits of the plan. It is undoubtedly a most useful book in the present state of the subject matter referred to, and should be read without prejudice, preconceived opinions. It is a scientific presentation of the facts, based on clinical observations.

The Daughter—Her Health, Education, and Wedlock. By WILLIAM M. CAPP, M. D. Philadelphia and London: F. A. Davis, Publisher. 1891. 12mo. Pp. 144—iv. Cloth. Price, \$1.00. (From Publisher.)

Every family physician is constantly feeling the need of some plainly written work giving homely suggestions for mothers and daughters. This little volume admirably supplies such a need. It in no manner undertakes to take the place of the doctor; but it does undertake to give such every-day practical information to his female patient as will be of service to him in talking with her, either to make diagnosis or to direct the proper line of treatment—whether sanitary or medicinal.

Sexual Neurasthenia—its Hygiene, Causes, Symptoms and Treatment. *With a Chapter on Diet for the Nervous.* By GEORGE M. BEARD, A. M., M. D., formerly Lecturer on Nervous Diseases in University of City of New York, etc. (Posthumous Manuscript.) Edited by A. D. ROCKWELL, A. M., M. D., Professor of Electro-Therapeutics in New York Post-Graduate Medical School and Hospital, etc. *Third Edition. With Formulas.* New York: E. B. Treat. 1891. Demi 8vo. Pp. 282. Price, \$2 75. (From Publisher)

The early need for a third edition shows the demand for this work. The author was about the first to call special attention to neurasthenia—to such an extent, at least, as to give this name to chronic nervous exhaustion. In no branch of medicine is the value of electricity more distinctly marked. Among the common causes of sexual neurasthenia stated by the author are evil habits, and excesses in venery, tobacco, alcohol, worry, and special excitements. A record of 43 cases are analyzed. The chapter on “Diet for the Nervous” is a very important one. The “busy practitioner” will find the formulas useful.

Wood's Medical and Surgical Monographs. Published monthly. \$10 a year; \$1 single number. Vol. X, No. 1. April, 1891. Wm. Wood & Co., New York, N. Y.

This number contains papers by Dr. Julius Althaus, on “Treatment of Syphilis of the Nervous System;” Mr. Herbert W. Page, on “Railway Injuries, with Special Reference to those of the Back and Nervous System in their Medico-Legal and Clinical Aspects;” Dr. Arthur Ransome, on “Causes and Prevention of Phthisis.”

Historical Sketch of the University of Maryland, School of Medicine (1807-1890). *With an Introductory Chapter, Notices of the Schools of Law, Arts and Sciences, and Theology, and the Department of Dentistry, and a General Catalogue of Medical Alumni.* By EUGENE FAUNTLEROY CORDELL, M. D. Baltimore: 1891. Cloth. 8vo. Pp. 218. (From Author.)

The full title given of this most interesting historical work gives the scope of the book. Many of its biographical sketches of great men give the book an important historical position with reference to medical literature in this country. Engravings of most of the present, and of a few of the great men of the Faculty years ago are inserted. Every Alumnus of the University, at least, should show his interest in the work by buying it of the author.

Medical Education, Medical Colleges, and the Regulation of the Practice of Medicine in the United States and Canada (1765-1891). By JOHN H. RAUCH, M. D., Secretary Illinois State Board of Health. Springfield, Ill. 1891. Paper. 8vo. Pp. xxxiv—222.

This is an official document of great value to every one interested in the history of medical education. The present annual report has the advantage over any former one in that it has full references to "Medical Education and the Regulation of the Practice of Medicine in Foreign Countries." We congratulate Dr. Rauch in that he has so excellent an Assistant Secretary as Dr. Wm. G. Eggleston, whom we knew personally before he moved from Virginia to Illinois as Assistant Editor of the *Journal of the American Medical Association*. The work is so full of detail that it is impossible to state in a few lines a better description of it than is given in the title. It is authority, and from its carefully compiled pages writers must continually draw items of information.

Year-Book of Treatment for 1891. *A Clinical Review for Practitioners of Medicine and Surgery.* Philadelphia: Lea Brothers & Co. 1891. Demi 8vo. Pp. 480. (From Publishers.)

The twenty compilers of this Year-Book are all eminent English practitioners and authors—each in his special department. As a review of the advances in treatment made during 1890 in Europe—especially as recorded in English journals and books—these annual volumes are of eminent value to every practitioner—whether in general or special

practice. The volume before us is considerably larger than any of those of previous years, but the arrangement is about the same. A first-rate index assists the doctor in quick reference to any subject spoken of in the volume.

Editorial.

Dr. Henry V. Gray, of Roanoke, Va.,

Proprietor of "Gray's Emulsion of Cod Liver Oil and Creosote," etc., continues in such impaired health as to compel him to give up the manufacture of the Emulsion which is possessed of many excellencies and was fast growing into popular use. He requests us to say that he will sell its formula, good will, etc., for anything like a reasonable price. Demands for this Emulsion could not be supplied during the past month. Two of the druggists of Roanoke certify that their sales of Gray's Emulsion last winter were double those of any other Emulsion; and the demand was rapidly increasing until Dr. Gray's ill health rendered him unable to attend to business.

Hand-Book of Local Therapeutics.—Announcement:

P. Blakiston, Son & Co., Medical Publishers of Philadelphia, announces this work for early publication—being a practical description of agents used in the local treatment of disease, such as ointments, plasters, inhalations, suppositories, bougies, etc., and the proper methods of preparing and applying them. The diseases which chiefly require local treatment are those of the respiratory passages—ear, eye, skin—together with certain general surgical affections, including diseases of women. In order that the various uses of each remedy may be thoroughly set forth, the following gentlemen have assumed authorship: Drs. Harrison Allen, Geo. C. Harlan, Chas. B. Penrose, and Arthur Van Harlingen. Each remedy is taken up alphabetically; and, after a succinct description of their pharmaceutical properties by Dr. Geo. I. McKelway, is considered with reference to the local treatment of the affections above outlined. The authors believe that the information contained in this work will not be found elsewhere. The *Hand-Book* will be of value to general practitioners as well as to those who are especially interested in sub-divisions of the clinical field. The work will form a compact volume of about 400 pages, arranged to facilitate reference, and containing, besides the usual index, a complete index of diseases.

Dr. Wm. A. Hammond's Suit for Libel.

It will be generally remembered that the newspapers of the country recently reported that Dr. Wm. A. Hammond, of Washington, D. C., had charged Senator Stanford \$5,000 for removing a wen from his scalp. This is pronounced a criminal libel by Dr. Hammond, and he has had a warrant issued against Mr. Wm. L. Crouse, Washington correspondent of the *New York World*, for sending such a libel for publication to his paper. Mr. Crouse is bailed until the trial this month. He says that the *World* has published two denials from Dr. Hammond, and that the proceedings are now taken against him because he refuses to disclose to the doctor the name of his informant. It is to be sincerely hoped that the author of the libel will be brought to justice, and punished according to law in such matters.

Continental Medical Congress.

The Committee of the American Medical Association appointed to consider the feasibility, etc., of a Congress of the Medical Professions of the Western Hemisphere, organized in Washington, D. C., May 7th, by the election of Dr. Chas. A. L. Reed, of Cincinnati, chairman; J. W. Carhart, of Texas, Secretary; and I. N. Love, of St. Louis, Mo., Treasurer. An adjourned meeting is to be held in St. Louis, October 14th, to adopt a constitution, by-laws, etc. Dr. Reed reported that as a result of an extended correspondence with representative physicians of South America, Central America, Hayti, and elsewhere, he finds sentiment unanimously favorable to the plan.

The North Carolina Medical Society

Will hold its annual session in Asheville May 26th, 27th, and 28th. It promises to be a session of more than usual scientific interest. Besides papers by its own gifted members, visiting practitioners of eminence have promised attendance and participation in the proceedings. Dr. J. M. Hays, of Oxford, N. C., is the efficient Secretary. The Local Committee of Arrangements seem also alive to the social pleasures of their visitors. A good and a profitable session is expected.

The Summer School of Medicine (Private), University of Virginia.

Advertised on page 55, is of special importance to any who propose beginning the study of medicine, or who wish to review the fundamental studies of medical science.

National Medical Examiners' Association.

This organization, begun in Washington, D. C., May 6th, has for its object, if possible, to harmonize all the laws of all the States regulating the practice of medicine, so as to adopt something of a uniform standard for all parts of the United States. Dr. J. H. Rauch, of Springfield, Ill., is President, and Dr. L. J. Picot, of North Carolina, Secretary. The other representatives present were:—Drs. Jerome Cochran, Alabama; C. R. Oglesby, Florida; J. C. Shroeder, Iowa; P. H. Millard, Minnesota; George Homan, Missouri; ——— Cole, Montana; W. P. Watson, New Jersey; W. W. Potter, and ——— Payne, New York; and Hugh M. Taylor, Richmond, Va.

American Medical Association.

The session in Washington, D. C., May 5–8, was a decided success. Officers for 1891–2 are: *President*, Dr. H. O. Marcy, of Boston; *Vice-Presidents*, Drs. Willis P. King, of Missouri; Henry Palmer, of Wisconsin; W. E. B. Davis, of Birmingham, Ala.; W. E. Taylor, of San Francisco, Cal.; *Treasurer*, Dr. Richard J. Duglison, of Philadelphia, Pa.; *Secretary*, Dr. Wm. B. Atkinson, of Philadelphia, Pa. *Place of Meeting* 1892, etc.—Detroit, Mich., first Tuesday in June, 1892. Dr. H. O. Walker, Chairman of Local Committee of Arrangements. Among the many elegant receptions, that given by Dr. and Mrs. Wm. A. Hammond, in their palatial residence, “Belcourt,” will long be held in special memory for its magnificence and hospitality.

International Clinics.

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Dr. Wm. A. Hammond's Suit for Libel.

It will be generally remembered that the newspapers of the country recently reported that Dr. Wm. A. Hammond, of Washington, D. C., had charged Senator Stanford \$5,000 for removing a wen from his scalp. This is pronounced a criminal libel by Dr. Hammond, and he has had a warrant issued against Mr. Wm. L. Crouse, Washington correspondent of the *New York World*, for sending such a libel for publication to his paper. Mr. Crouse is bailed until the trial this month. He says that the *World* has published two denials from Dr. Hammond, and that the proceedings are now taken against him because he refuses to disclose to the doctor the name of his informant. It is to be sincerely hoped that the author of the libel will be brought to justice, and punished according to law in such matters.

Continental Medical Congress.

The Committee of the American Medical Association appointed to consider the feasibility, etc., of a Congress of the Medical Professions of the Western Hemisphere, organized in Washington, D. C., May 7th, by the election of Dr. Chas. A. L. Reed, of Cincinnati, chairman; J. W. Carhart, of Texas, Secretary; and I. N. Love, of St. Louis, Mo., Treasurer. An adjourned meeting is to be held in St. Louis, October 14th, to adopt a constitution, by-laws, etc. Dr. Reed reported that as a result of an extended correspondence with representative physicians of South America, Central America, Hayti, and elsewhere, he finds sentiment unanimously favorable to the plan.

The North Carolina Medical Society

Will hold its annual session in Asheville May 26th, 27th, and 28th. It promises to be a session of more than usual scientific interest. Besides papers by its own gifted members, visiting practitioners of eminence have promised attendance and participation in the proceedings. Dr. J. M. Hays, of Oxford, N. C., is the efficient Secretary. The Local Committee of Arrangements seem also alive to the social pleasures of their visitors. A good and a profitable session is expected.

The Summer School of Medicine (Private), University of Virginia.

Advertised on page 55, is of special importance to any who propose beginning the study of medicine, or who wish to review the fundamental studies of medical science.

National Medical Examiners' Association.

This organization, begun in Washington, D. C., May 6th, has for its object, if possible, to harmonize all the laws of all the States regulating the practice of medicine, so as to adopt something of a uniform standard for all parts of the United States. Dr. J. H. Rauch, of Springfield, Ill., is President, and Dr. L. J. Picot, of North Carolina, Secretary. The other representatives present were:—Drs. Jerome Cochran, Alabama; C. R. Oglesby, Florida; J. C. Shroeder, Iowa; P. H. Millard, Minnesota; George Homan, Missouri; ——— Cole, Montana; W. P. Watson, New Jersey; W. W. Potter, and ——— Payne, New York; and Hugh M. Taylor, Richmond, Va.

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RICHMOND, JUNE, 1891.

Original Communications.

ART. I.—Ununited Fracture or Pseudarthrosis.*

By LEWELLYN ELIOT, M. D., of Washington, D. C.

When there is mobility between the fractured ends of a bone, at the end of six weeks, we have the establishment of a pseudarthrosis or ununited fracture.

The occurrence of pseudarthrosis is not common.

Dr. Geo. W. Norris, of Philadelphia, published, in 1842, a paper, on the "Occurrence of Non-Union After Fractures—its Causes and Treatment," giving a table of 946 cases of recent fracture treated at the Pennsylvania Hospital between the years 1830 and 1840, in which no case of non-union is recorded.

Dr. D. Hayes Agnew, following the records of the same hospital, found that in 6,480 cases of fracture, treated between the years 1850 and 1874, not one case of ununited fracture is recorded.

Walker, of Oxford, states the occurrence of six or seven cases to 1,000 cases of fracture in his practice.

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, March 13, 1890.

Lonsdale, of London, records but six instances in 4,000 cases at the Middlesex Hospital.

During nine years, but one case in 367 cases, according to the records of the Massachusetts General Hospital, was seen, and this one was very doubtful.

Hamilton is of the opinion that, in proportion to fractures everywhere, it is a very rare occurrence and would not exceed one in 500 cases.

Packard, on the contrary, says: "Delayed union is, by no means, rare. Scarcely a year passes that I do not see one or more instances in my hospital wards, and I have repeatedly been consulted about such cases in the private practice of others." He has seen more cases of delayed union in the leg than elsewhere.

The editor of the "Medical and Surgical History of the War of the Rebellion," Dr. George A. Otis, in speaking of "Shot Fractures of the Shaft of the Humerus," says: "Pseudarthrosis was infrequent after shot fractures of the shaft of the humerus, although, after simple fractures, this diaphysis may be considered as almost the seat of predilection of that complication. Six examples are recorded among twenty-nine hundred cases treated by expectant measures, and a somewhat larger number among the excisions in the continuity."

Drs. George A. Otis and D. L. Huntington, in the same work, when speaking of "Shot Fractures of the Femur," state: "Pseudarthrosis after shot fractures of the femur was not frequent. Sixteen instances are reported among 3,467 shot fractures of the femur treated by expectant measures."

Amesbury says he has seen fifty-six cases; some years later the number was increased to ninety. This experience is exceptional.

The *causes* of non-union of fractured bone are either local or constitutional. Among the local causes may be mentioned arrest of circulation by pressure, or rupture of vessels, fracture within the capsule, interposition of bone, tendon or

blood-clot, and the separation of the ends of the bone from any cause.

As *constitutional causes*, we may have syphilis, scurvy, rickets, debility, or low fevers. It is questionable whether old age may be enumerated among the causes of non-union.

The *treatment* of cases of pseudarthrosis consists in administering tonics, mineral and vegetable, open air exercise and generous diet.

Locally, it is most important to remove the cause of the non-union. The proper adjustment of the fragments, with rest of the part, may be all that is necessary. Should this fail, more active measures must be adopted. Rubbing the ends together, with a properly adjusted splint, will sometimes succeed.

In 1760, White, of Manchester, brought the operation of resection into notice. Brodie and Malgaigne opposed it. In 1787, Winslow suggested passing a seton of silk ribbon or tape between the ends of the bone, and allowing it to remain for four or five months, if not longer; but Physick was the first to introduce it to the profession and put it into practice in 1802. Tying the fragments with metallic ligatures is a practice as old as the days of Hippocrates. It passed from notice to be revived by Horeau in 1805, since which time it has been successfully practiced by many surgeons. In 1837, Malgaigne tried acupuncture. In 1848, Miller, of Edinburgh, operated by subcutaneous puncture. Diffenbach, in the same year, recommended that ivory pegs be driven into holes made with a gimlet. Caustics, electricity and acids have been employed by various operators.

The following is the brief history of a case in which I assisted on April 9th, 1878:

B. S. P., white, was seen in the early part of 1878, for treatment for syphilis. An examination revealed the presence of a pseudarthrosis in the right humerus at the upper third. He stated that, during his service in the United States Navy, he fell from the masthead to the deck, sustain-

ing a fracture which failed to unite after treatment. He was discharged on account of "false-joint of the right humerus resulting from non-union of fracture."

The arm was perfectly useless; so when an operation was suggested, he gladly accepted it, hoping to overcome his disability. The syphilis improved under the use of mercury.

On April 9th, 1878, after administering an anæsthetic, an incision about three inches long was made along the outer aspect, at the upper third of the arm, the bone exposed, and the ends were found bound together with strong bands. There had been an oblique fracture of the shaft, and the lower fragment was resting high up on the upper. The lower fragment was on the inside of the arm. After dividing the ligamentous bands and pushing back the periosteum, the end of each fragment was sawn off; the bone pierced, with a drill, to the medullary canal; a heavy silver wire suture passed through the holes, and the freshened ends brought together and lashed. The periosteum was now drawn down. As there was some bleeding, the edges of the wound were not sutured, but covered with a compress over a sponge stuffed in the wound. Reaction was good.

April 10.—Sponge removed and wound dressed with carbolized oil.

April 11.—Washed out cavity with a solution of salicylic acid and dressed with carbolized oil.

April 12 to 30.—The note is: "Condition good; carbolized oil dressing continued."

May 1.—Ends of bone in perfect apposition; splint applied (angle 45°).

May 6.—Bone is being covered, and appears to be uniting.

The case progressed favorably, and the next note is as follows:

December 15.—"Is at work in the hospital; can carry a bucket of water in the right hand without pain or inconvenience; has considerable use of his arm."

From this time until his discharge his improvement was continuous. He went to the Washington Asylum Hospital one morning, but must have left before night, since I have not been able to find any record of his admission or discharge from that hospital.

He presented himself some time in 1880, when the wire had almost worked its way out of the bone, and it was removed without any difficulty. The bone was found to be

firmly united, the arm was strong, of equal size as the other and was quite useful. He was, at that time, employed on one of the steam railroads.

1106 *P Street N. W.*

ART. II.—Plaster Bandage in the Treatment of Sprained Ankle.

By JESSE H. PEEK, M. D., of Hampton, Va.

EX-MEMBER MEDICAL EXAMINING BOARD OF VIRGINIA, ETC.

When I was a boy a sprained ankle was considered a serious lesion, and it took weeks to get well. Clay and vinegar were in demand, and the doctor was seldom consulted; the injured one hobbled about to get well as best he could. The fact is that the old people were afraid to keep the joint perfectly at rest, lest it might become stiff.

My method for the treatment of this injury will be described in the history and treatment of the cases reported below.

I am well aware that I am not describing anything new, but if those of my readers who have never used it will try it, they will find it vastly superior to the treatment of rest in bed and evaporating lotions.

CASE I.—The first case which I recall, was that of a laborer, fifty years of age, well developed, about five feet eight inches in height, and weighed 150 pounds. He fell on his ankle. When I saw him, one hour after the accident, he was sitting in a chair with his feet on a pillow in another chair. The pain was excruciating. The ankle was well encased in clay and vinegar. The joint was much swollen, and the least motion gave intense pain. As well as I could make out there were no bones broken.

I ordered him to bath the joint repeatedly in hot water through the afternoon until late bedtime, and gave him a hypodermic injection of morphine.

By way of explanation, I should state that my method of bathing the joint is, to start with water as warm as can be comfortably borne, rapidly increasing the temperature by

adding boiling water, and dipping water out of the vessel as the hot water is added. Continue this process for twenty minutes. This must be done at intervals of two hours for three or four times.

On the following morning I saw the patient again. He passed a fairly comfortable night; but as the effects of the morphine had worn off, the least movement of the foot gave pain. I snugly applied a piece of flannel from the instep to above the ankle joint, and over this a plaster bandage. I then put the foot at the window, exposed to the sunshine, and resting on a chair, directed him to let it remain there until the plaster was hard, and under no circumstances to put the foot on the floor that day.

Three days afterwards he was out in his yard putting up a fence. He said the joint was immovable, and gave him no pain to bear his weight on it. He made a rapid recovery.

CASE II.—Was that of a "society" lady, who in returning from an evening's entertainment, stepped on a stone and sprained her ankle.

I saw her the next morning. Her mother had bathed the joint in warm water and applied a mixture of sweet-oil, laudanum, and arnica. I found the joint swollen and very painful. The hot water treatment was used to reduce the swelling, and on next day the plaster bandage was applied. As soon as the dressing hardened, there was complete relief from pain, and she could bear her weight on the injured foot. In a few days she walked out to church without assistance.

CASE III.—This case has been very recently discharged. I was sent for to see a man sick at the residence of Mr. L., a well-to-do farmer. After I had prescribed for the sick man, I was requested to see Mr. L. I found him sitting before the fire with his foot wrapped up in flannel cloths and resting on a chair before him. He said he had sprained his ankle five days before, but his wife said nothing could be done but to keep still and bathe the ankle with laudanum and arnica. He had bathed it in hot water; clay and vinegar had been applied, hot lye used, etc.

I found the joint very much swollen and sensitive to touch. He could not bear any weight on it, and when the foot hung down the ankle would swell much more and become very painful.

I applied the bandage on the next day, Saturday. On

Monday, he was walking about his place with the aid of a crutch. There was no pain, only a little soreness, caused by the bandage rubbing the front of the leg. I split up the bandage about an inch, trimmed off the edges, and relieved the parts. He wore this dressing for a few days and was cured.

I might cite other cases, but their histories would be but repetitions of the above general facts. Among the advantages claimed for this method of treatment over the old plan, none stands out with greater prominence than the absolute and immediate relief from pain; and this is a factor that the surgeon desires to cancel as soon as possible in the treatment of any injury. My patients tell me it is very inconvenient having such a weight hanging on their leg, but there is no pain.

Again, by this treatment the patient can attend to his business—at least, partially—as soon as the plaster sets. This is quite a consideration. The farmer in the case above cited was able to conduct and look after the operations of his farm.

Try this treatment, those of my professional brethren who have not, and I am sure you will be pleased.

ART. III.—Suggestions About Abdominal and Pelvic Surgery *

By WM. H. WATHEN, M. D., of Louisville, Ky.

PROFESSOR OF ABDOMINAL SURGERY AND GYNÆCOLOGY IN THE KENTUCKY SCHOOL OF MEDICINE; GYNÆCOLOGIST TO THE LOUISVILLE CITY HOSPITAL, ETC.

The recent contributions upon abdominal and pelvic surgery, are probably more numerous and practical than upon any other department of general or special surgery; still there is a variety of opinion as to the best methods of treating pathological conditions within the peritoneum, or as to the immediate or permanent results of the many procedures that have been practiced. This is especially true of pelvic surgery, where we find in the practice of the most

* Read before the Obstetrical and Gynæcological Section of the American Medical Association, May 8th, 1891.

experienced and successful operators, accidents during the operation, and complications following it, for the prevention of which, there is no united opinion as to the correct technique to adopt; nor is it always possible to explain why troublesome complications occur in one case and do not occur in another apparently similar case. Careful observation and experience may finally teach us much wisdom in these matters, and I will ask your kind indulgence while I briefly allude to a few things that may be of value if carefully discussed by the members.

There is too much laparotomy done, and too many men are doing it—men who know too little about the diagnosis and pathology of abdominal or pelvic diseases, or about the best technique in operating, and have few facilities for doing such work. Continuously good laparotomy work cannot be done except by men who largely devote themselves to this department of special surgery, and with such men, some cases are operated on where the indications do not justify it. The appendages are sometimes removed for vague nervous troubles, where there is no disease of the ovaries or tubes, or peritoneal adhesions. Such cases are made worse, and are mutilated in a way that cannot be corrected.

The pendulum has swung too far, but many of our best operators are earnestly urging upon the medical profession that the operation is not indicated except in cases where there is well-defined disease that has resisted, or will resist, other more conservative means.

As the experience of an honest surgeon widens, he operates relatively less frequently, and he can recall cases that he does not believe should have been operated on. An honest, intelligent, and careful man may, when young in observation and practice, make mistakes in the selection of suitable cases for laparotomy, but this is less frequent than it was a few years ago. It is criminal to do dangerous or capital operations while ignorant of the best methods for doing such work, or for the purpose of adding a little cheap glory to one's reputation; or to report cases that apparently recover

from the immediate effects of the operation as permanently relieved, before the final results can be appreciated. Such men usually have many bad results or deaths that they do not report so promptly, and the profession, or the people, seldom hear much about them.

I have reported but a small minority of my successful cases, but have promptly reported my bad results or deaths, because by a careful study of such cases, we finally do better work, by learning how to avoid or prevent complications or accidents that may cause the death of the patient. Reported recoveries in simple cases of laparotomy do not always indicate superior or unusual skill in the operator; such reports are of little value to the medical profession, and may indirectly result in the death of many women by influencing ignorant men, with no facilities for such work, to attempt it because of its apparent simplicity.

What I may say relative to the technique, etc., of laparotomy, refers to cases where the conditions are manifestly such as to positively indicate the necessity for the operation. In preparing for an operation, the physical and mental condition, and the hygienic and sanitary surroundings of every patient, should be made as perfect as possible under existing circumstances; and unless absolute surgical cleanliness is observed in everything that may come in contact with the wound or peritoneum, septic infection may follow.

Some operators, who talk a good deal about antisepsis, do not know how to be surgically clean, because they have not learned to appreciate the value of cleanliness in every detail before and during the operation. The infection often comes to the patient by the neglect of little things, without the strict observance of which, no one can be a successful abdominal surgeon. The danger of atmospheric infection is practically *nil*, as has been shown by Kümmel and others, and by the continuously good results in operations done in large amphitheatres before several hundred students. It may be possible for septic matter to reach the peritoneum through the intestinal walls, but this has not been proven. A spray

of antiseptic solutions is not necessary, and if strong enough to kill pathogenic germs supposed to be floating in the atmosphere, it is positively poisonous if used during an abdominal section.

Some men who use the spray, Don Quixote like, while pursuing an imaginary foe, allow the deadly enemy to enter through numerous neglected channels—the hands, sponges, sutures, instruments, etc. Every operator should, of course, observe the broad principles that make the foundation of all good surgery; but if he neglects the details, he will be disappointed in the results. Asepsis is more easily accomplished in well-regulated private or public hospitals or infirmaries; in private houses, septic matter may more readily be introduced unless the operator, or an experienced nurse, rigorously superintends everything before and during the operation.

That we may better appreciate the practical significance of my position as to what constitutes asepsis in laparotomy, I will give some of the methods before and during an operation. I prefer not to operate in a room where the patient is afterward to stay, and when I am compelled to do so, if delay is admissible, I have the room thoroughly cleansed and ventilated for twenty-four hours before the operation, but use no spray or other means of disinfection. When it can be done, I operate in a room at St. Joseph's Infirmary, specially prepared for laparotomy work, and so arranged that everything in or about the apartment can be kept aseptic with but little care. The operating tables for the surgeon and nurses have plate-glass covers, and the trays for instruments, and pans for sponges and dressings, are white porcelain-lined.

Everything is carefully cleansed before each operation, and the operator and his chief assistant take a bath and put on clean linen and white aprons reaching from the neck to below the knees, and extending entirely around the body, so as to prevent the hands coming in contact with anything unclean. The towels are carefully washed and boiled, and are used for no other purpose. Soft and well-shaped sponges,

free of sand or grit, are selected, and after being carefully washed and made aseptic after the method of Greig Smith, eight ounces of bisulphide of soda, and four ounces of oxalic acid are dissolved in a gallon of water, in which twelve to twenty sponges are immediately immersed and kept for ten minutes; they are then washed by frequent changes of water for one hour, so as to get out all the sulphurous acid and sulphur. This is quite a labor, but it insures perfect freedom of septic matter. They are then wrung out of the water and put into a clean cotton or linen bag, so as to keep out the dust while drying. When dry, they are put in large ground-glass-stoppered bottles or jars, and may be kept indefinitely in a pure condition.

Sponges once used may again be made aseptic by the same process, but I prefer not using them a second time if they have been soiled in septic matter. If a sponge comes in contact with anything that may be unclean, it is not used until again prepared. Chinese hard-twist silk of three sizes is used. It is purchased in unbroken packages, and wound loosely on separate glass spools. These are put into glass test-tubes, which are stoppered with a piece of absorbent cotton and then sterilized. They are kept in the sterilizer for an hour, for three consecutive days. The silk is now so free of bacteria, that a culture could not be made from it, and if the cotton is not removed, it will stay in this condition. Each tube contains enough silk for a laparotomy. The silk and needles are kept during the operation in sterilized water, at a temperature of 212 degrees. This may not be necessary, but if the cotton has been partially displaced from the tube, it would be a wise precaution.

In the same boiling water I keep the small glass drainage and the large irrigation tubes. As our hydrant water is generally muddy, I use sterilized water, and always have it boiled, before operating, in vessels kept for this special purpose. The instruments are washed with sapolio, or some strong soap, and boiling water is poured over them, when I begin the operation. The hairs of the brush are pushed through the eyes of the needles and the holes in the instru-

ments, so as to get away all poisonous matter. It is well to have instruments, towels, dressings, etc., sterilized for an hour before using them, but they should be thoroughly washed before sterilization.

The patient is given one or more hot baths by a well-trained nurse; the vagina and rectum are washed with copious injections of hot water, and the pubes is shaved. Before making the abdominal incision, the abdomen is again washed with soap and brush, and wiped off with sulphuric ether. Dry towels, covered by towels wrung out with boiling water, are placed over the abdomen, so as to prevent anything possibly unclean coming in contact with the hands or any of the appliances used. The nails are closely cut, and the hands thoroughly washed with brush and soap before the operation.

The nurses in charge of the sponges, needles, and sutures, are as aseptic as the operator. I use no antiseptic solutions but use for sponges, instruments, and hands, boiled sterilized water kept as hot as can be borne. If everything is aseptic, we don't need antiseptics, and they may cause general or local trouble. I will refer to but a few points in the technique of the operation. Adhesions are carefully separated close to the tumor or structure to be removed, or the uterus, to prevent hæmorrhage or wounding the intestines or bladder. Adherent intestines should be separated if possible; otherwise the operation is incomplete, and the patient will not probably be permanently, if at all, relieved.

The patients sometimes suffer more after the operation than before it, because of the extensive adhesions induced by uncleanliness, antiseptics, or traumatism committed by a careless operator. I believe adhesions will be fewer if antiseptics are absolutely excluded from the operating room, and are not even used for the instruments or the hands. This may seem heterodoxical to many, but I have arrived at this conclusion after experience and careful observation. If the instruments and the hands are clean, we need no antiseptics; and if they are unclean, the solutions will not cleanse them, or prevent infection, but may so irritate the

peritoneum as to cause few or many adhesions. It will require more experience to decide how much damage is done in this way. Blood, pus, and all foreign matter should be removed, and great care should be practiced to prevent rupturing a pus sac or cavity in an operation for their removal.

When any foreign matter, except blood, has gotten into the cavity, it should be thoroughly irrigated with hot sterilized water. This is not only the best way to cleanse the peritoneum, but it is also an excellent means of preventing or treating shock. This may be done by attaching one end of a three-foot piece of gum hose to a glass tube, and the other end to an iron granite funnel, into which water is copiously poured and forced by hydraulic pressure through all parts of the abdomen and pelvis.

The drainage tube is sometimes invaluable, but if improperly used it is capable of doing much mischief. There are many cases in which it is indicated; there are many in which it is not. It should be used if we close the abdomen before hæmorrhage has ceased, or if foreign matter—that is possibly septic—has got into the abdomen. It should be, attentively cared for and frequently emptied with a long nozzle syringe, by a well trained nurse. It should be very small and light, with open end, and numerous fine openings on the sides. It should be carefully placed, and long enough to enter to the deepest part of the pelvis.

After the dressings are applied around the tube, a twelve-inch square piece of gum-dam, with a small hole cut in the centre, should be closely fitted around the neck, so as to keep the dressings clean. If a piece of absorbent cotton is kept over the mouth of the tube and held in position by folding over the gum cloth, it will absorb discharges and remove the danger of sepsis from the introduction of pathogenic germs. It should be removed when soiled and a new piece used.

Some of our best known laparotomists use too large drainage tubes, and do not protect the dressings and the wound by the gum dam. A small tube will usually

drain as well as a large one, and it does not subject the patient to so many dangers.

While it has been shown by Grawitz that the peritoneum may render harmless, and dispose of pus or pathogenic germs, it would be reckless to expect it to do so when we may supplant the efforts of nature by the use of a drainage tube, through which irrigations may be used if needed. The long nozzle syringe, or a syringe with a small gum tubing attached, affords the best means of emptying the tube, and this can be done aseptically. The practice of trying to drain the peritoneal cavity by introducing strips of gauze, or wick into the tube to its bottom, or allowing shreads to enter the cavity, as practiced by German laparotomists, is bad surgery, and may be a means of introducing septic matter. While aseptic gauze may usually drain efficiently, it sometimes prevents drainage and causes the blood to coagulate in the tube. This is especially true where capillary drainage is attempted by the use of the wick. I have never seen coagulation where the syringe was used. Probably the most correct exposition of the methods of drainage in Germany will be found in the paper, "Drainage in Laparotomy," by Saenger, of Leipzig, at the recent meeting of the Tenth International Medical Congress at Berlin. No mention is made of protecting the dressings from the discharges by the use of gum-dam, or of removing the secretions with the syringe.

Vaginal drainage, with possibly a few exceptions, should never be attempted, though Dr. August Martin, of Berlin, and other German operators frequently practice it. It can accomplish nothing more than supra-pubic drainage, and subjects the patient to greater dangers from sepsis. The tube should be removed as soon as the conditions will admit; and when bleeding has practically ceased, and there is only a small quantity of clear inodorous liquid removed, it is no longer needed. If the tube has to be retained more than forty-eight hours, it should be rotated a little twice daily, so as to facilitate the drainage by preventing obstruction in the small openings.

The dressings need not be disturbed to remove the tube, and in a few weeks the place where it was introduced can scarcely be detected; and ventral hernia will not occur at this point more easily than at any other part of the incision. Hernia in any case will seldom occur if we are careful to unite the ends of the abdominal fascia. This may be done by the deep suture, if the fascia is drawn out and the needle correctly introduced; but the separate suture of the fascia is more reliable.

Recognizing the fact that in laparotomy work death is too often caused by septic infection, and that this can nearly always be prevented, I am deeply in earnest in my desire to aid in impressing upon the medical profession what I conceive to be the best means of preventing the introduction of septic matter. As death occasionally follows prolonged anæsthesia in organic diseases of the heart, lungs, or kidneys, we should carefully examine these organs before we decide to operate.

ART. IV.—Dislocation of Both Clavicles at the Sternal End.*

By J. V. CARRAHER, M. D., of Washington, D. C.

Dislocation of the clavicle occurs at either the acromial or the sternal extremities. There are three varieties—the upward, the forward, and the backward.

The *forward dislocation* is produced by blows upon the outside of the shoulder, by which the clavicle is violently driven inward, so as to force its inner end forward upon the sternum.

The *upward dislocation* is extremely rare, there being but twelve cases recorded (*International Encyclopædia of Surgery*, Vol. III, p. 655). The causes are the same as those for forward dislocation.

The *backward dislocation* is produced by direct violence from in front, such as a blow upon the head of the bone,

* Read before the Medical and Surgical Society of the District of Columbia, November 14, 1889.

driving it backward from its natural position. It also results from blows on the outer extremity of the bone, and from compression of the shoulders towards each other.

The *symptoms of forward and upward dislocation* resemble each other in the main. The head of the bone can be felt beneath the skin near the upper border of the sternum; the shoulder is thrown backward, the head is inclined towards the affected side.

In *backward dislocation* the head of the bone will always be found behind the sternum, and commonly it is placed downward as well as backward; dyspnoea and embarrassed deglutition have been recorded as due to it, and numbness and stoppage of circulation in the arm have been observed from the pressure on the sub-clavian artery and the brachial plexus. In case the right clavicle is so dislocated, there is danger to the innominate artery and the important nerve trunks.

Treatment.—In the *forward dislocation*, reduction is effected without difficulty. An assistant places his knee upon the spine, and draws the shoulders backward while the bone is forced back into position. The chief difficulty is in retaining the reduction. To accomplish this, a compress is placed over the sternal end of the clavicle, and a figure of eight bandage passed over the shoulder.

In the *upward dislocation*, the reduction is simple—the same difficulty arises in retaining the bone in position.

In *backward dislocation*, the reduction is difficult; but, when accomplished, the bone is more perfectly maintained in its proper position. The method of reducing this dislocation is practically the same as for other dislocations, except the pressure is made upon the sternum, and not upon the clavicle.

When reduction cannot be accomplished, and life is endangered by pressure, the proper thing to do is to remove the head of the bone by excision.

The following are the brief *histories of two cases* of sternal dislocation of each clavicle which have occurred in my practice:

CASE I.—In October, 1884, a workingman, while employed on the Government works at Great Falls, fell from a platform into a hole beneath, striking the shoulder upon a bag of cement, dislocating the clavicles at their sternal ends *forward*.

I was called to his assistance, and without difficulty reduced the dislocations, but found it almost impossible to retain the bones in position by the pad and figure of eight bandage. After several attempts to retain the dislocations in place, I reversed the bandage, making the cross in front, and over the pad. I had no further trouble, and the patient made a speedy recovery.

CASE II.—On June 29, 1889, Frank Cook (colored), while driving a cart, became wedged between a wall and the side of the cart, forcibly compressing the shoulders—one toward the other. As a result of the pressure, both clavicles were dislocated at their sternal ends, upward and forward. He was carried to his home, and I was called to see him a short time afterwards. I found him unable to help himself, and with a double dislocation, as above noted. He stated that he was twisted and could not straighten himself.

There were no abrasions on the surface of the shoulders, nor anywhere else. I found no difficulty in reducing the dislocations by applying the knee to the back, and drawing the shoulders backward, but found it impossible to maintain the reduction. I directed him to remain in bed, and on the following day I called Dr. L. Eliot to assist me.

The dislocation was again reduced. Dr. Eliot succeeded in forcing both clavicles into position, while I made counter-extension from behind. A compress was applied to each sternal end, and a figure of eight bandage applied, with the cross in front instead of behind, the patient being directed to remain in bed for a few days.

This application was not in accordance with the text-book teaching, but was dictated by common sense.

The patient made a perfect recovery in a short time, and was enabled to return to his cart again.

Morgan's Liquid Hypophosphites.—Dr. Arthur R. Tiel, of New York, N. Y., says he has been using "Morgan's Liquid Hypophosphites" for two years in cases of sleeplessness and loss of memory due to overtaxed brain and nervous system, and most heartily recommends the preparation.

ART. V.—The Catheter in the Treatment of Nephritic Colic.

By R. O. OWEN, M. D., of Lynchburg, Va.

I am satisfied from the number of authorities which I have consulted on the treatment of this common affection, that the subject of nephritic colic has not received the attention it deserves. The busy practitioner of the day is usually content to administer a subcutaneous injection of morphine to his patient, and to trust to time to remove the obstruction.

Some of our more modern writers touch but lightly on the subject, while others—for example, Roberts, Strumpell, Pairier, Ashurst, and Bary—have given it great attention.

The passage of the calculus from the kidney to the bladder takes variously from one hour to several days, depending largely upon the character and formation of the stone, and upon the muscular coats and calibre of the ureter.

I shall but briefly mention the *symptoms*. The calculus having escaped from the kidney, the patient is seized with a sudden and intense pain radiating from the kidney down the line of the ureter, thence down the inner side of the thigh, and into the spermatic cord and testicle, which is greatly retracted. Usually there is retching and vomiting, with great prostration and cold extremities, bathed in a clammy perspiration; more or less suppression of urine, and if the attack be long continued, more or less febrile disturbance.

The modes of treatment indicated depend largely upon the duration and severity of the attack. The usual method consists of full doses of sulphate of morphia subcutaneously; cupping, wet and dry; hot poultices over the abdomen, or if the calculus be in the proximal end of the ureter (and this can usually be determined by the seat of greatest pain and local tenderness), then apply hot poultices over the kidney. Enemata of warm water to empty the lower bowel; diluents, if the stomach will retain them, etc., are all sometimes useful.

I have, in the past eighteen months, resorted to the use of the catheter, and have in the large majority of cases found a marked and immediate relief therefrom. I began its use purely by accident.

I was called one day to see Mr. A., policeman, aged about 30 years; previous history as to health and habits good; no previous history of stone. I found him in great pain with all symptoms of nephritic colic. I administered one-fourth grain of morphine, subcutaneously; ordered hot poultices, diluents, and warm baths. At the end of an hour there was absolutely no diminution in the pain. I then gave the second subcutaneous injection of one-fourth grain of morphine and waited thirty minutes, when, finding no abatement in the symptoms, I gave the third subcutaneous injection of the same quantity. I then waited over a half an hour, and finding that the pain was as great as ever, and my patient becoming very impatient, I concluded to chloroform him. In order to gain time, while the messenger was gone for the chloroform, I resolved to introduce the catheter and draw off a portion of the urine. I used an ordinary silver catheter which I had in my pocket-case. Having warmed and oiled the instrument, I introduced it, and as its tip entered the prostatic portion of the urethra, my patient gave a sudden scream. There was an immediate aggravation of all the symptoms—especially the pain—which lasted about a minute; then just as suddenly all pain ceased, and my patient remarked that it was “all over.” The catheter used had a screw cap on the handle end, and no water was drawn.

The sudden increase in pain, followed by such cessation of all symptoms, convinced me that the introduction of the instrument had caused it, and I determined to try it on such cases as might subsequently come under my observation; I have since that time tried it in eight cases, and in all but two, relief has followed in from one to five minutes, but was always preceded by a marked increase in pain in the prostatic portion of the urethra.

I have come to the conclusion that the passage of the instrument into the prostatic portion of the urethra must excite some reflex action of the pelvic plexus through the prostatic plexus, and cause a violent contraction, followed

by a great relaxation of the muscular coats of the ureter. The same exciting cause (the introduction of the instrument) acting through the prostatic and pelvic plexuses excites a reflex action through the hypogastric plexus, and causes increased activity in the secretory function of the kidney, thus causing an increased flow of urine which readily and quickly forces the calculus through the now greatly relaxed ureter into the bladder.

When there is reason to believe that the calculus is impacted in the ureter near the orifice, then catheterization of the ureter after the method of Pairer may be resorted to, though I have in one case given quick relief by the moderate distention of the bladder by the injection of a few ounces of warm alkaline solution, where I found the urine excessively acid in reaction. And I believe when the urine is alkaline, the injection of a weakly acid solution would be beneficial.

ART. VI.—Catarrh of the Prostatic Urethra.*

By W. R. JACKSON, A. B., M. D., of Mobile, Ala.,

VISITING PHYSICIAN TO CITY HOSPITAL, ASSISTANT DEMONSTRATOR OF ANATOMY MEDICAL COLLEGE OF ALABAMA, ETC:

Catarrh of the prostatic portion of the urethra is one of the most troublesome conditions the practical physician has to deal with; it will exhaust the patience and skill of a physician quicker than anything else in the line of genito-urinary surgery.

This condition is generally the result of a urethritis, usually gonorrhœal in origin, which has existed for several months, and has been attended with most all the complications of gonorrhœa, as cystitis, epididymitis, prostatitis, orchitis, etc., and we often find one or more strictures in the penile urethra, the result of a long-standing urethritis. But cases of this obstinate chronic inflammation of the pars prostatica urethræ have been observed without any concomitant stric-

* Read before Mobile County Medical Society, May 16, 1891.

tures; and even where stricture exists, and is relieved by urethrotomy, the catarrhal condition of the prostatic urethra often continues, in spite of the most varied and persistent treatment.

A catarrhal condition of other portions of the urethra sometimes exists at the same time as that of the prostatic, and gives rise to a muco-purulent discharge which soils the linen; but if the catarrh is limited to the prostatic urethra, there is no discharge from the meatus, because the compressor urethræ prevents any discharge from passing anteriorly except during micturition; and if there is an abundance of muco-pus formed in the prostatic urethra, it passes backwards into the bladder, as the sphincter vesicæ is not so strong as the compressor urethræ muscle.

The *symptoms* of this malady resemble somewhat those of stricture. There is a frequent desire to micturate; more or less pain just before, during, and immediately after micturition; the size of the stream is usually diminished as in stricture; in some cases, there is a neuralgic pain in the region of the prostate during the intervals of micturition, which becomes almost intolerable when an effort is made by the patient to evacuate the bladder. This severe pain must have its origin in the bladder as well as in the prostatic urethra, and it frequently is referred to the head of the penis.

The first urine passed contains muco-pus—filamentous, as well as flat and irregularly shaped shreds, and some epithelium, while the urine last passed is normal in appearance. When the urine is examined chemically, oxalate and carbonate of lime are found in abundance. When this condition has existed for quite awhile, impotency, polyuria and spermatorrhœa come on, to the horror of the patient, who, often being subjected to various plans of treatment without improvement, has given himself up to the use of some narcotic or anodyne to relieve his excruciating agonies, and has abandoned nearly all hope of ever being cured.

The causation of this disease, as I mentioned at the outset, is a urethritis, which has run on for twelve months or

more, and centered on the prostatic urethra, and has usually subsided in the remainder of the urethra. The prostate gland is often chronically inflamed.

This inflammation becomes chronic, effects changes in the mucous and submucous tissues of the prostatic urethra; and the said changes, in some way, possibly by the densified tissue impinging on the nerves of the part, produce severe pain and other prominent symptoms.

The prostatic portion of the urethra is more often affected than other portions, because there is more irritation present there from discharges of the ejaculatory and prostatic ducts; also this portion of the urethra is more abundantly supplied with nerves than are the other portions of the tract.

A catarrhal condition of the urethra is more obstinate than a similar condition of the respiratory and other mucous tracts, because the irritation is kept up by the acrid urine frequently passing over the inflamed surface, which tends to aggravate the existing condition.

Some writers claim that this catarrhal condition is kept up by the peculiar condition of the constitution of the patient. Some think the constitutional cause is a uric or lithic acid diathesis; others, that it is a strumous or tubercular predisposition; while most claim that it is a purely local affection, producing, secondarily, constitutional disturbance by impairment of digestion and hæmatosis. The patient is generally of a nervous or neurotic temperament; hence, many writers treat of this condition under the title of "Genito-urinary Neurosis."

Evidently, the hygiene of the patient during the urethritis has a decided tendency to produce this condition; as intemperance, sexual excesses, onanism, exciting avocations, and irregular and improper diet. All of these tend to keep up the inflammation and combat all treatment directed to its cure.

Dr. Otis thinks that stricture of the penile urethra keeps up the catarrh of the pars prostatica urethræ, and cites cases in which the catarrh suddenly disappeared when the stricture was relieved. He thinks a narrow meatus some-

times causes this condition; but there are numerous cases in which stricture of the meatus and other portions of the urethra existed and was relieved, and yet the troublesome catarrh still persisted.

The diagnosis of this condition is easy. There are pain and uneasiness in the perineum; a frequent desire to micturate; shreds of dead mucous membrane, muco-pus in the first urine passed; and when a metallic sound is introduced, there is found a hyperæsthetic condition of the whole urethra, but more especially in the prostatic portion. Sometimes the tenderness and pain in this region are so great that it is impossible to pass even the smallest instrument into the bladder without the use of an anæsthetic. It is this condition that produces a spasm of the compressor urethræ muscle, and a consequent closure of the membranous urethra just in front of the prostate gland, and leads many physicians to diagnose the trouble as an organic stricture of the urethra; but when an anæsthetic is administered the spasmodic condition is overcome, and the largest sized instrument can readily be introduced.

When Otis' bulbous searcher is introduced into the bladder and withdrawn, muco-pus is seen on the shoulder of the instrument.

In some cases, the inflammation seems to weaken the sphincter vesicæ, and causes an incontinence of urine. Such is the case when there is an exacerbation of the catarrh, and the prostate gland is affected.

When the finger is introduced into the rectum, the prostate gland is normal in size, but very sensitive.

The prognosis, as to life, is favorable in all cases. But, as to recovery, in some it is very doubtful; as some patients, after being treated by several physicians, become habitues of some anodyne or narcotic, and usually die of an intercurrent affection.

Most cases, if properly treated, will recover; but several months are required for the urethra to return to anything like the normal condition.

The treatment is very varied, and not altogether satisfactory.

Some recommend the daily passage of metallic bougies. Begin with an average size, and increase until the full size of the urethra is reached, which can readily be determined by Dr. Otis' plan. A flaccid penis, measuring three inches in circumference, has a urethra 30 millimetres in circumference, which is equal to a No. 30 bougie of the French scale. For every eighth of an inch above three inches in circumference one number larger on the French scale is required. After the urethra has acquired a tolerance of the instrument, it is recommended to depress the handle of the instrument when in the bladder, and let it remain from five to twenty minutes; it appears the instrument acts favorably by pressure. Under this plan of treatment some improve, but are not cured.

Another mode more successfully used is the daily injection of a 1 to 15 per cent. solution of sulphate of zinc deep down into the urethra. After the bladder is evacuated by the patient, a catheter-syringe is introduced just within the compressor urethræ, and the solution is made to pass over the prostatic urethra; and in ten or fifteen minutes the patient should discharge the injection, thus getting a double effect of the drug; never use over eight or ten drachms of the injection at a time, and have it of the temperature of the body.

After four or five such applications in ordinary cases, the malady begins to improve; but, in some cases, no improvement is apparent. Then stronger injections or cauterization must be used by means of a Dittel's porte remède, or an Ultzmann's urethral dropper, depositing only a few drops of the solution in the prostatic urethra. Five per cent. solution of nitrate of silver is generally used.

But it should be kept in mind that considerable danger attends the use of these strong injections, as acute prostatitis, orchitis, or cystitis, might result, and do your patient much harm. If no untoward effects are noticed in the next thirty-six hours after the use of the cautery, you may con-

sider your patient safe; and in about three days you may expect marked improvement, when you can repeat the cauterization.

Some surgeons use the cold sound, or psychrophor of Winternitz. The temperature of the water circulating in the hollow sound must be about 75° F. to begin with, and, at each subsequent sitting, which should not be longer than ten to twenty minutes, the water is made cooler, until fifty or forty-eight degrees is reached. Some derive much benefit by the use of warm or even hot water passing through the psychrophor.

Rectal enemata of warm water seem to act well as an accessory to the other plans of treatment.

Cocaine, four per cent. solution, has been used in catarrh of the prostatic urethra with good results, often resulting in a speedy cure without any other than the ordinary constitutional treatment, which consists of the administration of alkaline diuretics to neutralize the urine, and of tonics to build up the system. The cocaine drives the blood out of the inflamed tissue, and tends to lessen the inflammation, and greatly diminishes the pain. The application of cocaine is made like that of nitrate of silver solution—only it is made oftener—as much as three times a day.

Medicated urethral suppositories have been used by many, but with only limited success.

Electricity has been used with great benefit, and it is predicted that this agent, if the proper electrodes are used, will be the only reliable remedy for catarrh of the prostatic, as well as other portions of the urethra.

The last resort, when all other remedies are of no avail, is one of the cystotomies, which drains the bladder by a new channel and gives rest to the chronically inflamed urethra, thereby tending to restore the inflamed tissues to their normal condition. But, in some cases, the *perineal* incision closes before the catarrh subsides, and necessitates a re-opening; and, when the catarrh does subside, the perineal opening sometimes fails to close, and results in a permanent fistula. If you put in a catheter, *per urethram*, and let it re-

main to drain the bladder and give the fistula time to heal, you will set up the catarrhal condition in the urethra again.

But easier of performance, and involving a minimum of risk in operation if clean hands and instruments only are used, is *supra-pubic* cystotomy, as revived by Dr. Hunter McGuire for so many different purposes, such as removal of vesical calculi, etc., but principally for the treatment of prostatic troubles where the chief indication is the gain of physiological rest by the urethral route. In a short while, the patient learns to discharge his urine *at will* through the supra-pubic opening. He first described his operation in a paper read before the American Surgical Association, and published in the *Virginia Medical Monthly*, October, 1888; and since then many contributions have been made to surgical literature by him and others, enlarging the field of usefulness of the operation.

Some cases get well of themselves, when the patient changes climate, diet and hygienic surroundings.

ART. VII.—**Duality of Mind—Report of a Case (Epileptic Vertigo and Hemidrosis).**

By ELLIOTT T. BRADY, M. D., of Marion, Va.,

ASSISTANT PHYSICIAN TO SOUTH-WESTERN [VA.] LUNATIC ASYLUM, ETC.

Cases of duality of mind, or double-personality, are of sufficiently rare occurrence to warrant their report without the usual apologetic preface; and when, as in this instance, there are such complications or accompaniments as complete unilateral sweating, chronic Bright's, and a possibility of pyelo-nephritis, the case possesses more than ordinary interest.

George G., native Virginian, aged 47, married, the father of five children; a tobacco manufacturer. Has a liberal education, is intelligent and moral, and of good habits, except that he drinks regularly, but not to the point of intoxication. Previous condition of health good, except as ap-

pears in this history. Always robust and energetic, leading an active life, and usually surrounded by comforts and social pleasures.

In 1863, while in the army, he was, on one occasion, charged with drunkenness—a charge of which he was wholly innocent, having taken no stimulants at the time; and having no recollection of behaving in any other than his ordinary manner, was at a loss to understand why such a charge should have been brought against him, and attributes it to a similar attack to the one from which he now suffers. His relatives consider that the present attack dates from 1880, when they could notice peculiarities in speech and manner, and that he would become enthusiastic on whatever subject was under discussion, becoming easily excited in argument. While in Baltimore on business in 1883, he found himself in a room at a hotel, whither he had been taken by friends. He did not know why he had been taken there; was on the street attending to business matters; had not been drinking, and had felt in no way unwell. His friends said that he entered a store with which he had business, sat down, and seemed stupefied, responded in monosyllables when addressed, seemed dazed, and his gait was staggering, and they, thinking him intoxicated, took him to his room and put him to bed. He regained consciousness about four hours later, having, however, no cognizance of his attack, except that he thought it odd that he was in bed at that hour; felt well, except that he was somewhat drowsy.

After this, similar attacks came on frequently, of varying duration, until his friends and relatives were led to believe that he was drinking heavily; and in December, 1884, he was sent to Staunton for treatment. He was greatly benefited by his treatment there, and discharged as restored in 1885. Soon the attacks reappeared, and, being still considered drunkenness, his business suffered greatly. His attacks became so frequent, and he, at times, displayed such tendencies towards violence, that he was again committed and sent to this asylum at Marion October 8th, 1890.

At this time, he was robust, intelligent, and gentlemanly in manner. Conversed freely and rationally. Gave a clear account of himself, but showed slight nervousness when speaking of himself. He has no intimation of an impending attack, except occasionally a “crackling, popping” sensation in his neck and throat; this is a frequent, but not a constant precursor of an attack.

The attacks come on suddenly and at irregular intervals, and usually at night. At the time of the attack he has no convulsive movements, does not fall, and, to all appearances, has not even lost consciousness, but he is unconscious in so far as his relations to his usual self are concerned. There comes over his face a gradual but complete change of expression; from his usual bright, cheerful, and intelligent expression, and upright carriage, he changes to a downcast, shamed, suspicious, and sullen expression, with drooping carriage, and aimless gait. He will answer in monosyllables when addressed, will feed himself, attend to calls of nature, dress himself, and go through with routine matters in a listless way. Recognizes persons whom he has seen while in similar previous attacks, but not those whom he has met while in his normal state. He will speak politely, and sometimes rationally, but slowly; and frequently gives way to emotion, sobbing and crying, but makes an effort, usually successful, to control himself, only to break forth again and again in the same manner. While in this state, he speaks of the trials and sufferings he is enduring, and has endured, but speaks of no pain, and no physical indisposition. His pupils are dilated (equally), and the expression of the eye glassy, and his look wandering from one object to another as though in search of something. The urine in these attacks is loaded with phosphates, they being more abundant than in any case I have ever seen.

During these attacks, he has profuse sweats when excited, and these sweats are absolutely unilateral; *the left side*, up to the median line, will be bathed in beads of perspiration—face, trunk, and extremities; and *on the right side* of the line there will not be the slightest trace of moisture. This is perceptible when in his normal state, but the sweating is not so profuse. There is no difference in temperature between the two sides at any time. No paralysis. Sensation equally acute on both sides.

When in his normal state, has some numbness—at times in the left hip and limb, and has occasional sharp pains in the lumbar region. Has a trace of albumen in his urine at all times; and at irregular intervals has varying amounts of pus in his urine.

He regains consciousness suddenly, and then has no remembrance whatever of what has occurred during his attack, not even of conversations held then, and does not recognize persons to whom he was introduced while in his second-self-state. His attacks last from a few hours to a

week—the longest I have observed being six days; the shortest a few, probably two, hours. They have occurred, since coming here, on an average twice monthly, and the average duration has been about 48 hours. The changes have been less frequent, of late, and have been for shorter periods.

There is no difference in the size of his limbs, and no evidence of any trophic changes in them. The grip is equally strong on both sides, though slightly tremulous on the left. During one attack he had convulsive movements on left side and twitching of facial muscles. He bit his tongue, and had some frothing at the mouth, with stertorous respiration. This attack lasted only a few hours, and was distinctly epileptic.

REMARKS.—Cases of “dual existence,” “duality of mind,” or “double personality,” are everywhere the subject of much speculation, and the general conclusion is that they are all instances of epileptic vertigo—the vertiginous effects presenting somnambulic phenomena in lieu of the usual convulsive movements. With this view I coincide, and consider the above case one of *epileptic vertigo*. The improvement shown under our epileptic treatment would tend to sustain this view. But a diagnosis which merely considers the one point would be very incomplete. There are certain evidences of nephritis, and, too, indications of pyelo-nephritis, which must be considered as having a bearing on the mental phenomena, and treatment which has benefitted the renal condition may be entitled to due credit for at least a part of the effect on the mental state. The enormous quantity and sudden appearance of phosphates in the urine in the times of attack, and its continuance during the attack, are indicative of great cerebral disturbance.

Now, what is the nature of this disturbance? *Is it a cerebral convulsion, a spasmodic cellular activity?* And if so, is it confined to one, or equal in both, cerebral hemispheres? Or is there local wasting, as is prophesied, as it were, by the (even though slight) tremor in the grip of the left hand, the numbness of left hand, and lower extremity? Or again, is this numbness due to the renal state? There is room for much speculation, and foundation for several diagnoses.

Without further elaborating diagnostic theories, I will call attention briefly to the importance and interest of this case from a physiological, a pathological, and a medico-legal point of view.

It possesses *interest to the physiologist*, from its indications of the possibility of a dual individuality in a single person. Pathological conditions are not infrequently indices which point us to physiological truths. This case, then, might lead us to suppose that the theory already advanced of the possibility of distinct action of the two cerebral hemispheres is not wholly chimeric. There may exist in each person, or in each encephalon, a kind of trinity, as it were, consisting of the right hemisphere, the left hemisphere, and the controlling, or harmonizing, or co-ordinating influence, resident either in the cerebellum, the pons, or the medulla, or in all three combined; and these three, when in the normal state and working in harmony, combine to form what we recognize as personality or individuality—the idiosyncratic working of each individual hemisphere being coalesced, and co-ordinated or “arbitrated” into harmonious unison by ganglionic or other influences.

May not this harmony in this instance have been destroyed by trophic changes, due to thrombi of renal origin, causing cessation of this harmony, allowing one hemisphere to gain the ascendancy, until absorption has taken place, and the automatic union being re-established, the combination again becomes effective, and our former well-known individual appears in his wonted status? This is, of course, not presented as a theory, as I have not sufficient foundation to even construct a theory on the subject; but it is merely given as food for the thought of brighter minds, which may elucidate from the mass of mystery whatever modicum of truth may be therein buried.

To the pathologists, the presence, in this case, of the apparent duality of mind, the unilateral sweating, or hemidrosis, their existence, and particularly, their co-existence, must be of interest. As to structural abnormalities, only time can give us the opportunity to see *post mortem* the

changes which we fain would now observe, and which would now prove, *ante mortem*, of calculable benefit.

Hemi-drosis, hemi-diaphoresis, transpiratione unilatera—synonymous terms for the more practical name of one-sided sweating, is of rare occurrence. Local sweating, as of the head, in rickets, or on one side of the face in certain affections of the sympathetic nerve, and sometimes in connection with aneurismal, or other tumors of the neck or chest, is not of rare occurrence. But complete unilateral sweating of face, trunk, and extremities, with the line sharply drawn, must be rare, as I have never read of but one case, and do not remember hearing of any other.

From a medico-legal standpoint, this case is of interest as supporting the views:

First. That an epileptic can consciously commit a crime, which requires premeditation, care in planning, and skill in execution, and is, therefore, irresponsible, and should not, in justice, receive the death sentence, and indeed, should not receive any punishment, although his own, and public safety, would demand his constant supervision.

Second. That such a condition may arise without any previous intimation that the person is so afflicted.

It will be remembered that when this patient was in his somnambulist state, he would remember only what had occurred in the same or a former state; and had no memory of what had occurred in the somnambulist state, after having regained the normal state.

I omitted to state that while the patient can and does write during his somnambulist state, his spelling, usually accurate, is less so, and his writing is not so plain as in the normal condition.

Bromidia.—Dr. Joseph G. Ross, Professor of Clinical Medicine and Diseases of the Chest in Rush Medical College, has prescribed bromidia frequently during past three years in insomnia without pain, in delirium of acute fevers, in delirium tremens, puerperal mania, and has found it invaluable.

ART. VIII.—**Forty Years a Doctor—Some of the Difficult Duties, Sorrows, and Joys of Medical Practice.***

By **WILLIAM W. PARKER, M. D.,** of Richmond, Va.

PRESIDENT MEDICAL SOCIETY OF VIRGINIA, ETC.

My theme to-night is "Forty Years a Doctor." As I get older, I see the importance of trying to be useful rather than ornamental. A large majority of you are just about to embark upon the field of practice, and to you I make this address. Were I about to visit a country strange and unknown, and could I find a friend who would honestly tell me of his sojourn therein for forty years, I would be a most interested listener. With this conviction, I propose to-night to tell you in brief what I have learned in forty years of some of the difficult duties, sorrows, and joys of medical practice. A volume might be written on each of these heads, but I propose to speak to you only thirty minutes.

Let me stop to advise you so soon as you get your diplomas to get also the Code of Ethics of the American Medical Association and carefully study it. It will tell you how to behave towards your medical brethren. I find there is more need of the "Code" now than there was forty years ago. We have always claimed to be governed by the highest Ethical Code of any profession known to the world. And first of some of the difficulties of practice.

Heretofore your study has been chiefly books. Henceforth let it be man—a subject to you of more interest than that of the sun, moon, and stars.

Let us look at the "human face divine," a surface about 6x8 inches.

The *forehead*, the seat and expression of dignity and high resolve; also, of treachery and low cunning.

The wondrous *eyes*, the light and windows of the mind; the expression of joy and the "fountain of tears," of

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hope and despair, of love and hate, of tenderness and hardness, of innocence and guilt, of returning health and rapidly-approaching death.

The *nose*, where the courier of death is seen perched a month in advance; the pale, pinched nose, the dry lining membrane, the quickly-dilating nostrils, showing that the patient's days are numbered.

The *lips* in babyhood telling of trouble within. The curling lips of scorn and contempt in later years, the compression of determination, now firm and defiant, now breaking into ripples of merry laughter.

But part those lips and look within at the soft, velvety, flexible body lying in its little ivory bed. The *tongue*, one of the wonders of the world, ruling nations in halls of legislation and on battle-fields, now lying to the doctor and then to himself; leading and misleading, telling of pains that have no existence, of joys and sorrows domestic, of trials and anticipations incredible, of hope and dejection, of courage and despair. Then its changes. 'Tis white and red, and brown and black, corrugated and serrated, wet and dry, thin and swollen, rough and smooth, soft and hard, steady and trembling, all indicative of some form of disease.

And lastly, the *chin*—firm and relaxed and dropping, declaring that all is now over.

The *pulse* has to be carefully studied; 'tis soft and hard, strong and feeble, round and flat, slow and quick, thready and windy, intermitting and remitting. With your right hand on it and your eye upon your patient's face, you will as you advance in close observation see wonders. How indelibly photographed upon the doctor's memory are hundreds of faces long since cold in death! Sometimes a flash of light will come over the leaden countenance, enkindling hope even to his experienced eye, but doomed soon, alas! to disappointment.

All this and much more you have to learn by close observation at the bedside. The patient must be examined

from head to foot till you find what is the trouble. I think it well to begin at the head and go regularly down. I had a patient last week troubled with a severe headache, who had not sense enough to tell me about it till I asked him. The French are right—first is diagnosis. They do nothing till this is settled. Better to write no recipe than to write the wrong one. Don't be in a hurry to generalize. This requires long observation. Too many men write books and mislead others sadly in this way. "Post hoc" is not "propter hoc." Don't forget this. Don't think you are a pattern of all your patients. One of the most difficult subjects is indigestion. Milk is the best diet for nine-tenths. No two stomachs in the world are exactly alike. If sausage agrees with you don't conclude it will agree with everybody else. Don't be conceited. Sensible patients don't like conceited doctors. Don't undervalue your brother's observations when they don't accord with your own. Read the journals and other books as well as read your patient. If you can't give a *sensible or plausible reason* for your opinion of a case regard it (the opinion) as of doubtful value. Don't forget you can both cure and kill. Never desert a case you undertake so long as your advice is followed, whether the progress be satisfactory to you or not. Don't forget that some diseases are necessarily chronic. Don't hesitate to get help by consultation if you are in a dilemma. It is plainly your duty. Don't get discouraged if your patients die. All doctors lose patients. Those who never lose them have none to lose.

Patients will sometimes die *unexpectedly*, too, I care not who may attend them. When I commenced practice this discouraged me greatly. I feared I had overlooked important symptoms. After practicing three or four years here I went abroad, and I found the same thing happened in the large hospitals with the closest attention from trained nurses and in the practice of the most distinguished doctors. In the early hours of the morning we would visit the hospital and "go the rounds," one of the most distin-

guished physicians leading thirty or forty young doctors. The "chief" would examine a patient, give the history, etc., and conclude by saying, "I think he is now in a fair way to recover." Next morning at the same hour we came to the same bed. There is nothing but the bare iron bedstead. The man died during the night and his body is now in the dissecting room, and some student of pathology is trying with scalpel in hand to solve the mystery of his sudden departure. The chief "shrugs his shoulders" and passes on to the next cot.

But let me illustrate this point—that is, how unexpectedly patients sometimes die—by a case occurring early in my own practice that was exceedingly sad, and deeply impressed me. In a very interesting family that I had attended a year or more, the oldest son was a boy of great promise. He was eighteen, handsome and good, and the pride of the family, and very dear to me. He was taken with typhoid fever. I so pronounced it from the first. I had seen him but two or three days before his mother asked me to bring an older doctor in consultation. I said I had no objection, but no doctor of any sense would give "John" medicine at this stage of his disease; that there was plainly nothing to give medicine for. Every function of the body was well performed; but that the time might come when consultation would be proper. This seemed to quiet the fears of the mother. But at dinner I happened to mention the matter, and my mother told me I *must* get consultation. I protested, but yielded at last, and got one of the oldest and most clear-headed doctors in the city to see the patient that evening. After he had carefully examined him, he turned to the mother and said: "Madam, there is no need that Dr. Parker and I retire to another room to consult about your son. He needs no medicine at this time; there is not one indication to give medicine for. If you need my services at any time hereafter let me know, and I will meet Dr. Parker again." That night at 4 o'clock I was called to see John die. Had Dr. Patterson, the consultant, not seen this patient and justified my opinion, I would have never ceased

to reproach myself for my (supposed) ignorance and carelessness in not detecting the approach of death in this case. There was some occult trouble in the nervous centres, invisible to mortal eye, which led to this tragedy. Though I mingled my tears freely with the family at the loss of my dear friend, and though Dr. Patterson called on the family and attempted to exonerate me from all blame, still the doors of that home were ever afterwards closed to me. The lesson was valuable. If consultation was desired I got it. Obedience to my mother was truly a blessing.

Never get frightened and lose your head. The cooler you are the wiser and safer you are. A highly nervous man is not fit for a doctor, nor a lazy man, nor a heartless man.

I don't believe one woman in a hundred is fit to practice medicine. Not to be bold and quick in emergencies is sometimes death to your patient. I have seen old doctors who were babies in this regard.

Be always and everywhere a gentleman. Be honest and truthful, but don't tell a patient he has "cancer or consumption." If you have any doubt on this question, I refer you to a full discussion of it in a paper of mine on "The Duty of a Doctor Toward His Patient Suffering with Malignant Disease," published in the *Medical Ledger* of Philadelphia, and also in the *Transactions* of the Virginia State Medical Society for 1888. To tell a man he has cancer or consumption is to make him doubly miserable, and also to shorten his life. Tell him he has a "tumor," or his lungs are "weak," and that he has "bronchitis" (both of which are true), and he will be satisfied. It is plainly your duty to make your patient as comfortable and as happy as you can. God conceals the day of our death from us in mercy. So should the doctor; but you should be certain to inform the patient's friends in full time of the real nature of the case.

When you are wrongfully discharged by a family don't show resentment. It is true they will never employ you. This would be to confess to all of their neighbors that they had wronged you. This is too much for poor human nature. It might be agreeable to some people to

see you were wounded, but this is not the proper reason. You would sacrifice your self-respect and dignity by it. Hate no man on account of his ignorance or weakness. Patients have a legal right to discharge a doctor whenever they think proper; but they have no more moral right to do so than to turn their backs on and dishonor an old friend without *just cause*. When a doctor is discharged by a family they dishonor him as far as 'tis in their power. They damage his professional standing. They say by their conduct, "I have a long time had faith in Dr. Jones, but I find now I was mistaken; I prefer a new and strange man to him." Sensible men often sin grievously against our profession in this way. I am asked by a father in tears to save his drowning daughter. I am a good swimmer; he is not. I throw myself headlong into the water and use all the skill I possess to save the drowning girl. I dive to the bottom and bring her to the surface, when a cruel wave tears her from my embrace, and she again sinks out of sight. I plunge beneath the water the second time, but the treacherous current has borne her far down the stream, and I rise exhausted and disappointed. I struggle to the shore with difficulty, sad and in tears, and am met by the irate father, who reproaches me with bitter words, and tells me never again to enter his door. Ungrateful wretch, you would say! A child is lost in the woods, and I am asked to go in search of him. I know the country very well. I am gone for days, sometimes without food; am up all night in the cold and wet, searching every hill and ravine. Worn out after a week's search, I return wretched and exhausted, and report that I did my best but failed to find the dear child. I am told that I was negligent; did not use diligence and care in the examination of the ground, and that henceforth this friend is my enemy, and will do what he can to injure my business. You will say that this is monstrous, villainous. Was such base ingratitude ever exhibited? Yes, I say, a thousand times in this good city of Richmond.

Worse than this is the case of the doctor and his patient in some cases. Let us see. It might not have been *impossible*

for the good swimmer to save the drowning girl. It might not have been *impossible* for the searching friend to find the lost child, but often it is *absolutely impossible* for the doctor to save the patient. It often happens that all the doctors and the best nursing cannot save from death. Indeed, we ought to know that death is God's law. Men are born to die, and some to die early. Would you abuse a carpenter because the plank used by another man in the construction of your house rotted early? Do you expect sap-pine to last as long as white oak? Is it the doctor's fault that your children have consumption, or are of a rheumatic or scrofulous tendency? Who laments the difficulties of the situation more than he? Who mourns your daughter's death more than he?—not your nearest neighbor. The doctor, too, has lost a dear, confiding friend. His heart has been bleeding all alone as he saw months ago the certain approach of death; but he hides his sorrow deep down in his heart even from you. The spring flowers that he with enforced joy placed on the white pillow of your dear daughter had no sweetness for him, though with feigned gladness he extols their fragrance to his dying patient! How often he can say—

“I am not happy when I smile.”

And as appropriately—

“Thou hast wounded the spirit that loved thee.”

Merchants and railroads don't discharge their attorneys every time they lose a case.

There is not a doctor sleeping in Hollywood or in the valleys and mountains of Virginia who has not a hundred times received just such ungrateful and unjust treatment at the hands of Christian men and women. Is there any excuse for this? Very little. If the guilty parties were grossly ignorant there would be excuse; but this is not always the case. No sensible man should, in the city especially (where he may have his choice of physicians), select a doctor to whose care he commits the health and lives of his family without due consideration. If he makes a mis-

take he can soon find it out. An intercourse of a few weeks or months should satisfy him whether or not his new doctor is a man of sense. In no way does a man show whether he is wise or a fool so much as in conversation. If a doctor talks well on almost every subject, it is fair to conclude that he is well informed on that subject to which he has given his life. No man of sense will, of course, employ as a family physician a drunkard, a libertine, or a lazy drone. If so, he has no one to blame but himself. Now, having selected the doctor, you should give him your confidence. If his patients get well in reasonable time you should be satisfied. If this success continue for five, ten, or fifteen years, and then comes a death, should such an event destroy your confidence of so many years? If you found your faith waning you should have asked for consultation, and you would have had it promptly. Many lives are lost yearly by a change of doctors. To know a patient's history and peculiarities is of the greatest importance to a doctor. If you attend a man a great while you know all his weak points, just as the jeweler who has been mending a watch for years, knows almost before he opens it what the trouble is. If the doctor is *grossly neglectful* of a very ill patient, this is just ground for dismissal, but the judgment in this case should be guarded, certainly not hasty. Hear his defence before you dismiss him. Don't listen to your neighbor, Mrs. Jones, who is very sure "her doctor" would have cured your child. Does Mrs. Jones know more about your sick and your doctor than you and your wife combined? Do you consult her about your business affairs? The fact that the doctor expects to get pay for his services makes it less probable that he will neglect his patient.

I take this occasion to notify you, my young friends, of this bad treatment, so that you will not think your lot exceptionally hard. All your predecessors, without one exception, have had the same sad fate. Nevertheless, I advise you to love all your patients from the start. It will make your work easier and more pleasant. Besides it is your duty to trust, though you may be deceived. One of the infirmi-

ties of our nature is to love change. People change butchers, grocers, druggists, and doctors without sense or reason. Beware of those new patients who love you so much at first that they could almost eat you up. They will tire of you very soon. I never saw an exception. It shows a weak head and heart. But when you see gray-haired men change the religion of their fathers for a new faith of which they know little, you must not be surprised at younger people's unsteadiness. Sallust's charge against the people of Rome is true of us to-day:—" *Cupidus novarum rerum.*" But I must hasten. It is a great deal easier to give satisfaction to sensible people—people who do not expect too much, and who have some idea of the difficulties surrounding the practice of medicine—than to ignorant people who suppose you must know everything. No man in any profession has more use for brains than the young doctor. He must use his reason, his best judgment in every case. He has no experience. He has no right to guess. There is so much obscurity, so much of action and reaction of one organ on another—so much fear that the medicine may damage the digestion rather than relieve the organ supposed to be affected! The whole process from beginning to end is one of pure mentation. Early in life I happened to have a remarkably clever patient, a man who would stand in the front rank in the Senate of the United States or House of Lords. He had been out of health some days and I inquired what he had done for himself. "Done for myself," said he, "why, what do you suppose I have done? If you doctors are often in doubt, what can I know about physic?"

But I promised to speak of a *doctor's sorrows*.

To spend half of one's life with the sick and dying would seem a sad fate—to have a dozen people daily looking anxiously to you for health, when you know 'tis not in your power to give it. If all our patients were of this class, sad indeed would be the life of a doctor. A large majority of our patients recover, and the gratitude they show is some offset for the death scenes we are compelled often to witness. If we practice medicine a long time, however, we must out-

live most of our best friends. Those who gave us their confidence in early life and maintained it to the end are indeed jewels. We would almost give our life for them. They are more than patients; they are dear personal friends whom we tenderly love and whom we know through and through. Their homes were our homes. For them we would gladly "spend and be spent." We know their constitution so well that we have little difficulty in giving them prompt relief, but presently the time comes when medicine will do good no longer. Nature is failing and we see it plainly, though we keep the sad fact from our friend, but his confidence is true to the end. He resigns himself to his fate, if a Christian, with cheerfulness. There are some homes in this city sacred to me, and I never pass them, though it be in the small hours of night, without remembering the dear ones of long ago. Blessed be their memory!

Doctors are sometimes pained by a patient saying, after paying his bill, "Doctors' bills are hard to pay. I get nothing to show for my money." Such remarks are made by men who ought to know better. Health is better than houses or lands, and this man thought so too when suffering from pain and prostration; but he is ungrateful, and *loves money* too much. The fact is, money sometimes cannot pay for the services done by the doctor, and the doctor whose sole aim is to make money is a disgrace to his profession. You can't pay for a mother's love, nor can you pay for the faithful services of the physician who, day and night for weeks, pours upon you the treasures of years of study and observation, and the richness of a full sympathizing heart. You make him an acknowledgment, but what "will a man give for his life!!"

If a man is satisfied his system is out of order, and is unwilling to pay \$2 for its careful examination and restoration, he puts a poor estimate upon himself. It costs sometimes this much to put an old silver watch in order.

A physician, now dead, said to me: "Doctor, what do you think of people whom you attend gratuitously and cheerfully when poor, and so soon as they get better off get

a new doctor, and pay him, too." I told him it was infamous conduct. He said he supposed the reason was that they could not "display" themselves and make claims to importance to him who knew them well, but would do so to the strange doctor who did not know their antecedents. This is probably the true explanation. But the old doctor would rejoice with them in their prosperity and continue a true friend, which might not be the case with the new doctor. The policy is bad, to say nothing of the principle. Another eminent doctor, long since dead, said to me sadly: "Ah, doctor, I only claim I am the family physician while in actual attendance on the case." It is sad to recur to the cases of ingratitude in a doctor's life. Some are almost incredible. I attended a poor man's family for many years. The father was once so ill for ten days with brain congestion that it took forty pounds of ice daily to keep it down. Some time after this, matters improved and he set up a grocery, and being detained from dinner one day I went in and asked for a ginger cake to stay my hunger and I had to pay my cent for it. What made me remember it was that it was the *last cent* I had. Another case of a man whose family I had also attended for years for nothing afterwards set up a small store on Main street. I wanted one day twenty-five cents to get something at the Old Market and stopped in to borrow it, but he "did not have the change in the drawer," he said. He was guilty both of ingratitude and lying. Both these men are dead. The latter was a young man. Similar cases might be multiplied. When at your age, I would not have believed they were true, hardly on any testimony. Such cases are sickening *ad nauseam*. Poor humanity! No obligations can bind some men, even though they extend back two generations. You may attend fathers and mothers, grandfathers and grandmothers for nothing, but the sons and grandsons will prefer other medical men to you.

Don't join societies to get practice. Such a course is not legitimate in my opinion. Societies are not organized for this purpose. Certainly don't join the Church for

any such object. This would be selling yourself to the devil for small price, especially if you are a Methodist. In a practice of forty-three years I have known of but one decent doctor, I am glad to say, who intimated in the most delicate way to a gentleman that he desired to attend his family. This is saying a good deal for the profession of Richmond. It gives me very great pleasure to make the statement. Our profession takes the highest ground on the subject of seeking business. Be sure not to make too many visits. Be strictly conscientious in this matter.

But a few words on a more pleasant subject:—*Some of the Pleasures of a Doctor's Life.*

To be able every day you live to give relief from pain, to quiet anxious fears of mothers and daughters, to carry with you into dark homes light and cheerfulness is very delightful. Let me say in parenthesis, a doctor should cultivate a cheerful spirit himself. No man but a doctor can lie down every night of his active life with the pleasant consciousness that he has been a blessing to his fellow-man. It is truly his business to "go about doing good." With all the desertions referred to, in the end you will probably have more true friends, especially among the best half of humanity—the ladies—than most other men.

The largest *fee* I ever got was from an Irish girl, eight years old, whose sister, sixteen years old, was lying ill with pneumonia. It was many years ago. She was the daughter of a poor widow in the suburbs. There were two smaller children in the family. It was by the labor of this sixteen-year old daughter that the family got bread, and I saw her value to the household. I told the mother my fears, which it seems the eight-year-old child overheard, and dreadful alarm filled her breast. She waited on the sick sister with the greatest tenderness, and the smaller children were kept quiet and orderly. I promised the mother I would call again late at night. It was dark and rainy. Fears and forebodings increased with the surrounding gloom. The eight-year-old girl could not stay in the house, but in spite of the cold remained out doors watching for my coming.

When in the distance she heard the sound of horses' feet, her heart swelled with hope and fear, but when, peering through the darkness, she caught sight of me she exclaimed, with an emphasis and heartfelt earnestness that thrilled me through and through, and which I shall never forget, "Thank God, here comes the doctor"—a prayer of thanksgiving that went as straight to Heaven as that of sainted prophet or priest, and I felt that even my name had been mentioned and honored in the courts of Heaven. It may be, too, the prayer of that little orphan girl has turned aside the dart of death uplifted against some dear one of my own household.

I hope, my dear young friends, you will never see the day you will not have some poor patients. A church without poor members and a doctor without poor patients will never be recognized in Heaven. If you will keep your eyes wide open and observe closely, it may be the happy lot of some of you to witness phenomena of disease that will not only immortalize your name, but what is far better, confer untold blessings upon mankind. As you know, the field of observation is boundless and the need of increased knowledge is pressing. We know but little. Let us strive to know more. Don't be too much a slave to other men's opinions. I sincerely hope the success and career of this class may be more brilliant than any of its predecessors. If you will in early life take the "Great Physician" as your pattern, you will live well and die well.

Wm. R. Warner & Co. have introduced some new and valuable preparations. "Antalgic saline" is a remedy for "headache," influenza, and neuralgia. Dose, one dessert-spoonful every four or five hours. As an antidote for *la grippe*, they issue "pill chalybeate compound"—each pill containing carbonated protoxide of iron gr. ijss and extract nux vomica, one-eighth grain. Dose, one pill every four hours, and increase to two pills three times daily. It is well to use the "antalgic saline" before beginning on the pills.

Clinical Reports.

Selected Cases from the Richmond Eye, Ear, and Throat Infirmary. (I.) Obstinate Tertiary Syphilis. (II.) Simultaneous Paralysis of Internal Rectus of Right Eye, External Rectus of Left Eye, and Left Facial Nerve.

By JOHN DUNN, M. D., of Richmond, Va.

Case I—Case of Tertiary Syphilis—Suggesting that one True Chancre does Not Protect against Another Years After, etc.

The patient, W. A., aged 45, was first seen February 13th, 1891. He gave a history of chancre fifteen years ago, followed by slight secondary manifestations. His treatment had been various forms of mercury, and they had seemed to be sufficient, as the syphilitic manifestations had disappeared under their use. This treatment had not been continuous, but had been directed rather to the symptoms as they appeared.

About two years ago he began to have trouble with his nose. The mercurial treatment was prescribed, and had been more or less persistently kept up since. The nose trouble continued to increase in severity, until finally, a considerable fragment of bone came from the nasal cavity.

In September, 1890, Mr. A. had connection with a woman, in regard to whose freedom from disease he had doubts. About eight or ten days later, a small sore made its appearance on his prepuce. This sore, from Mr. A's description, was not painful, was circumscribed, not deep, and at first was covered with a small scale, which on being removed, showed an ulcerated base. The patient burnt this sore, but as he was drinking rather hard at the time, he neglected it. The sore grew worse, and finally assumed a phagedenic character. Mr. A. then visited a physician who put him on an active mercurial treatment, and who burnt the sore with the electric cautery. This caused the sore to heal. It immediately broke down again, however, and spread again with increased rapidity.

In the next two or three months the patient's health began to give way, and ulcerations attacked his feet, the sides of his chest; finally his voice began to grow weak, and his throat became painful whenever he attempted to swallow.

His condition February 13th, 1891, was as follows: Syphilitic ulceration of nose, pharynx, larynx, skin of chest wall, penis and feet. Examination of the nose, which had be-

gun to flatten along its cartilaginous bridge, revealed a total destruction of the cartilaginous septum; one-half of the vomer had necrosed and come away, while the remaining upper one-half was in a necrotic state along the lower part, from which the mucous membrane had been eaten away. The posterior superior end of the vomer could not be examined because of a large gumma partly filling the space between the pharyngeal wall and the soft palate. When such an examination could be made, an ulceration was found extending from the sphenoid down along the left side of the remaining portion of the vomer; this ulceration was covered with a thick black scab. The middle turbinates, covered with a thick, yellowish, adherent matter, were so swollen that they impinged almost their whole inner length against the perpendicular plate of the ethmoid. The free edge of their perpendicular plate of the ethmoid was ulcerated along its whole length. The posterior part of the nasal cavity, in the neighborhood of the necrotic remains of the vomer, was filled with black crusts, the removal of which caused bleeding of the ulcerated surfaces below.

On the right side of the posterior wall of the pharynx was a gumma as large almost as half a pigeon's egg. This protruded so far towards the soft palate, that examination of the post-nasal space could not be made. The surface of this tumor was much inflamed, and centrally the surface was a small whitish area, from which protruded two or three shreds of tissue, as though the gumma were on the point of breaking down.

On the right vocal cord at its posterior end, was an ulceration, as was also on the left cord, though this was smaller than the one on the left. Exactly below the posterior commissure was a small tumor, almost the size of a split pea. The patient's voice was so husky that I told him I feared it would always remain so.

There was a skin ulceration about the size of a silver quarter on the right side of the chest wall.

A phagedenic ulceration had attacked the penis. This ulceration began near the frænum, and had spread beneath the prepuce, most of which it had destroyed three-fourths of the way around the penis. At the frænum the ulceration was deep enough to make the patient justly afraid it would "eat a hole into the urethra." The ulceration had spread so as to involve a considerable portion of the right glans penis. The surface of the ulceration was rough and covered with whitish shreds of half detached tissue, any

attempt to remove which was very painful to the patient and caused the ulcer to bleed.

As a dressing the patient was using a yellow oxide of mercury salve, the only visible effects of which were to keep the penis greasy and to produce excoriation of the skin in the neighborhood of the ulceration.

The last ulceration was one on the inner side of the foot. This had begun as a small crack in the midst of a circumscribed inflamed area. This narrow erosion had become about 3 mm. wide, and about 3 inches long, and was increasing at both ends.

A horrid ozæna accompanied his nasal trouble, and the mental distress of the patient, who appreciated that the disease was making rapid progress, and that nothing he had taken had in any measure checked the advance of his trouble, was extreme.

His treatment, as mentioned before, had been mercury, internally and externally, until in despair he gave it up and was trying the "vegetable alteratives." He had taken no iodide of potash. His physicians had suggested it, but he had told them he could not take it, and they had given him the *alter ego* of syphilitic treatment, mercury. He had tried small doses of the iodide of sodium, but he thought it had not agreed with him.

The question of what to do for a person suffering with tertiary syphilis, who cannot take either the iodide of potash or the iodide of sodium, is not easy to answer.

I told Mr. A, he had to take the iodide of potash. He said he would try to take it if he could keep it on his stomach. He "knew he could eat raw eggs, and he would take it with them."

On February 14th, he began to take 5 grs., of the iodide three times a day, fully expecting to vomit it as soon as he had swallowed it, so strong was his belief that he could not "stand its effects." It was not until some time later that I found out upon what his belief was founded. He had been told by a friend years before "never to let anyone give him potash." He had no trouble in keeping the five grains on his stomach, and the dose was rapidly increased to twenty-two grains a day. The result was one of those striking ones that every physician prescribing iodide of potash for tertiary syphilis meets with from time to time.

Below is given Mr. A's condition the latter part of March,

1891, that is, about six weeks after he began taking the potash.

The ulcerations of the foot, penis and chest wall had healed. The gumma in the larynx had disappeared, as had also the ulcerations of the vocal cords. The voice, though a little rough, was almost normal. It however, at times, still became hoarse, and now and then came so that he could not speak above a whisper. The gumma of the posterior pharyngeal wall had entirely absorbed, so that no trace of it could be seen. It had not been broken down as I at first had feared. After its disappearance, the mucous membrane of the pharyngeal wall over the gumma had remained for a few days fiery red, but this redness soon disappeared. The swelling of the middle turbinates had disappeared, and the ulceration along the lower border of the perpendicular plate of the ethmoid had healed. There was no ozæna as long as the nose membrane was kept clean. But there remained a considerable area of necrosis along the lower posterior border of the remains of the vomer. The discharges from the nose were greatly reduced in quantity and altered in character. The treatment of the penis had consisted in removing, as far as possible, the white shreds of tissue, and cauterizing with solid nitrate of silver. Between examinations the ulcerated part of the penis had been kept moist by being wrapped in a layer or two of absorbent cotton, wet with a solution of chloral hydrate, which, so far as I know, makes the cleanest and most effective continuous dressing yet suggested for old syphilitic sores. The ulcerations on the vocal cords were touched twice with silver solutions.

In regard to the treatment of the nose, I began with a spray of copper sulphate solution, which was applied as soon as the nose had been cleaned of its scabs with a soda solution. As soon as the nose membrane began to improve, a solution of eucalyptol and fluid vaseline was substituted for the copper.

The above case has been reported somewhat at length—not because it contains anything new, for only well known remedies were used and along well-defined lines; but *firstly*, because it shows that the statements of a patient suffering from tertiary syphilis, even though these statements be backed by other physicians' treatment, are not always to be relied upon when he says he cannot take the iodide of potash.

Secondly, Because the case is interesting as showing how many parts of the body may at the same time be affected by the disease.

Thirdly, Because it is a striking example of the value of the iodide of potash where there are active tertiary skin lesions, and of its superior value to mercury in causing the disappearance of these lesions. (The patient received no internal medicine other than iodide of potash during the treatment, except such morphine as he gave himself, for he is addicted to the opium habit).

And *lastly*, because its history suggests a very interesting question in regard to the possibility of re-infection of syphilis. The history runs thus: chancre; secondary symptoms, slight in character; several years later, necrosis of the nasal bone, which goes on slowly and progressively for eighteen months, no other symptoms of tertiary syphilis being present during this period. The patient then has connection with a woman; this is followed eight or ten days later by a small sore upon his prepuce. This sore, under the application of irritants, assumes a phagedenic, a tertiary character; while within the next two or three months tertiary manifestations appear on his foot, body, in his larynx and pharynx.

The delayed appearance of the sore is interesting, as is the fact that irritating it caused it to take on a character suggestive of the tertiary stage. Then, in connection with this, the appearance, almost at the same time, in various parts of the body of tertiary lesions of a more or less acute character, suggests the possibility of their connection in some way with the sore on the penis. Otherwise, why should a process which for two years had been confined to the nose, suddenly become virulent in its nature and attack so many and so various parts of the body as an acute inflammatory process? Such is looked upon, I know, as a not unusual thing in the history of syphilis, and the fact that syphilis does at all manifest itself after having been latent a great number of years, allows of no further wonder than

that the number of its manifestations may be greater than one.

A discussion of the question is out of place here, and the inferences drawn from more than one such case would be required for a fair discussion to be entered upon; therefore, I shall only state the possibility suggested, by consideration of the history of this case. It is that tertiary syphilis may be made to assume an acute character by inoculation from a primary sore, or from the secondary manifestations furnishing inoculable virus; or, in other words, that latent tertiary syphilis may be made manifest by re-inoculation of the patient with specific virus.

This is, however, only a possibility as suggested by consideration of one case. Could the suggestion be proved, it would serve as an explanation for not a few interesting questions relating to late and to inherited syphilis.

Case II.—Simultaneous Paralysis of the Internal Rectus of the Right Eye, External Rectus of the Left Eye and of the Left Facial Nerve—Condition two Months After the Attack.

On March 2d, 1891, the patient, a well-built mulatto boy, 18 years old, while stooping at his work felt an unusual sensation in his head, and, on standing erect, he found that when he looked straight in front of him he could see nothing to his left. Occasionally, for the next few hours, he saw double, but this soon passed away. When, two or three days later, he came to the clinic, he complained only of inability to see objects to his left.

Examination showed conjugate deviation of the eyes, the right eye being pulled outward by the unopposed right external rectus, the right internal rectus being paralyzed; the left eye was pulled inward by the unopposed left internal rectus, the left external rectus being paralyzed. The paralysis of these muscles was seemingly complete. There was no double vision in any part of the fields; the pupils were normal, and responded to light and to accommodation; fields normal for the position of the eye; fundus of each eye normal.

There was also paralysis of the left facial nerve, seen most plainly in the muscles about the left side of the mouth. The paralysis of the left orbicularis palpebrarum was only partial, as was shown by the patient's ability to almost completely close the left eye—not completely, however—as

enough light entered between the lids to make the patient remark that he could not close his right eye as he could his left. Nor could the left eye be completely closed by the endeavors to bring into play the muscles of the maxillary region, as will be done, if we endeavor to shut the eyes as tightly as possible. Of the nerve fibres to the orbicularis palpebrarum muscles, those to the inferior palpebral portion of the muscle seemed to be the least affected, the reflex action of this portion of the muscle being, to some extent, retained.

This fact, when taken together with certain other observations in regard to the reflex response of the inferior palpebral portion of the orbicularis, makes it highly probable that the centre for these fibres is distinct from that for the muscle as a whole, and that it is more intimately connected with certain other brain centres than is the centre for the other portion of the muscle.

The paralysis of the facial fibres to the lower muscles of the face was far more decided—whistling, spitting, chewing on the left side of the mouth, etc., being interfered with. In smiling, and in the other emotional expressions, the left side of the face presented the appearances usual in cases of one-sided facial paralysis.

No paralysis of the tongue, uvula, or palate, could be demonstrated. There was no evidence that either the taste or the hearing were interfered with; nor was there any history of even transient hemiplegia at the time of the attack. Speech was normal.

The position of the lesion capable of producing paralysis of the internal rectus of the right side, together with paralysis of the external rectus of the left side and partial paralysis of the left facial nerve, has been pretty accurately located in the tegumentum of the pons at left sixth nucleus, for through this nucleus passes some of the fibres of the facial nerve; while from it, probably along the posterior longitudinal fibres, lies the path of the opposite internal rectus—the sixth nucleus thus regulating, to a certain extent, the associated movements of the internal and external recti.

The treatment given was the iodide of potash, at first in ten-grain doses, which was later reduced to five grains three

times a day. Later still, strychnine gr. $\frac{1}{30}$ three times daily was given.

March 11th.—The internal rectus of the right eye has much improved in strength, and by special effort the internal rectus can be made to draw the right eye almost in to the inner canthus. Paralytic nystagmus, however, exists, and a series of short jerky movements shows that the internal rectus has not regained its full strength.

From *March 4th* to *March 11th*, the return of power to the internal rectus has been gradual, and the internal rectus seems to respond more quickly, and to a greater degree, to the efforts of accommodation than to those for lateral movements. No appreciable change in the condition of the left eye and left facial nerve.

March 21st.—Further restoration of power to the internal rectus of right eye; paralytic nystagmus still present, though less in degree.

March 28th.—External rectus of the left eye is beginning to regain its strength.

April 3rd.—External rectus of the left eye can draw the cornea almost to the external canthus. Paralytic nystagmus present in both eyes at the extremes of movement for the paralyzed muscles, though much less for the right eye than for the left. Facial nerve has greatly improved.

April 24th.—Paralysis of the facial nerve has disappeared. Restoration of power to the paralyzed eye's muscles is well-nigh perfect, judging from the appearance of the eyes in various movements. As the recti muscles regained their strength, diplopia developed to a certain extent, but it does not seem to have been a source of much inconvenience to the patient.

May 15th.—There still remains some slight weakness of the external rectus of the left eye, with slight paralytic nystagmus at the extreme of contraction for this muscle. Otherwise the paralyses have disappeared.

The nature of the lesion it would be interesting to know. So far as the patient knows, there were no premonitory symptoms, no fever, no pain in the head, no nausea, no giddiness, no visual disturbances. He is standing at his work enjoying, he believes, the best of health; he stoops over and the picture, as before presented, is complete—not altogether, perhaps, since, for the first few hours following the attack, the patient, at times, saw double, showing that

the conjugate deviation was not as complete as it was destined to be; and that one of the two paralyzed eye-muscles still retained a certain amount of power (perhaps in efforts of accommodation).

Whether in cases of conjugate deviation due to disease of the sixth nucleus, it is the rule for the conjugate deviation to be complete from the first moment of the attack; or whether it takes a longer or shorter time for the eyes to assume the conjugate position, I do not know. In this case, if the patient is to be believed, it required several hours—an inference made from the fact that double vision was, during these hours, at times, possible; for, after the eyes assumed the conjugate position, diplopia became impossible.

The acute onset points to a vascular lesion as the cause of the trouble, though the age of the patient, 18 years, his general health, absence of heart and kidney trouble and of all evidences of inherited syphilitic taint, are against this view. As for a small tumor, syphilitic or tubercular (for no other class of brain tumors are much affected by internal medicine), being the cause of the lesion—the acute onset would almost at once do away with this possibility. Gowers says, "In the rare cases of tumor in which sudden symptoms occur, these are always accompanied by others of gradual development." The facts that there was no evidence of inherited or acquired syphilis in the patient, and his age, are against the idea of pressure from a gumma on, or a gummatous infiltration of, the sixth nucleus as the cause; on the other hand, the disappearance of the paralysis under the iodide of potash, considered apart, favors the possibility that one of these two was the cause. The fact that the patient shows no signs of a tubercular diathesis makes it unlikely that tubercular trouble was the cause.

It seems to be a fair presumption that the paralysis of the different muscles was probably due to a small hæmorrhage into the neighborhood of the sixth nucleus, acting rather by pressure upon the nucleus than by destruction of its nerve elements. The restoration of power to the muscles

supplied by the injured nerves kept pace with the absorption of the blood clot.

218 E. Franklin street.

Correspondence.

Local Anæsthetic for Comparatively Painless Extraction of Teeth.

Mr. Editor:—As one of the great corps of “country doctors” who act in almost every capacity for their patrons, I submit the following formula as a local anæsthetic for the almost painless extraction of teeth:

R_x.—Hydrochlorate cocaine..... 5 parts.
 Crystal. carbolic acid..... 6 “
 Pine gum camphor..... 6 “
 95 per cent. alcohol q. s. to make..... 120 “

Mix.

Inject one to three minims of this mixture with a hypodermic syringe, deeply into the gum on the inner and outer sides of the tooth. Apply over the gum a piece of absorbent cotton wet in the solution. Wait four to five minutes. The gum can then be freely incised, and the tooth drawn with a minimum amount of pain. Try it.

J. WILTON HOPE, M. D.

Poquosin, York county, Va., May 11th, 1891.

Peacock's Bromides.—Dr. R. Robbins, of Hartford, Kan., writes that “this is a most excellent preparation; has used it with success in spasms, nervousness, etc.; that it is an excellent remedy for headaches; and adds that he cannot get along without it.”

Renz & Henry's Elixir of Three Chlorides, in small tonic doses, is well recommended to bring about healthy red corpuscles in the anæmic blood of those subject to chronic malaria, struma, latent syphilis, etc.

Analyses, Selections, etc.

Nervous Troubles of Uræmia.

Lancereaux discusses this subject in his recently-published *Leçons de Clinique Médicale*.

The nervous perturbations in uræmia have not the same significance as the digestive. The gastro-intestinal phenomena, in fact, are, at least at their onset, compensatory. They present a character of utility, even to some extent of necessity, which must be recognized, and which regulates therapeutic interference. The nervous accidents, on the contrary, constitute always symptoms of ill omen, which must be combated as soon as possible. Moreover, the disorders of the first category result from an elective action on the digestive mucosa, the excretory function of which is solicited by the afflux of excrementitious principles. There is nothing like this in the reaction of the nervous system, which is simply encumbered, like all the other tissues, by the products of disassimilation; only it reacts more energetically by reason of its special excitability.

Among the accidents purely nervous, we may first isolate and describe apart the group of *cardio-pulmonary accidents*.

In *dyspnæic uræmia*, the thoracic organs are not directly affected. They only give expression to the functional disorders of the nervous centres.

Dyspnæic uræmia presents three principal varieties: Simple, paroxysmal and spasmodic dyspnœa. *Simple dyspnœa* is characterized by acceleration and variations of extent of the respiratory movement and by the breathlessness which follows the least effort, even walking. Examination of the mode of respiration always shows a predominance of the *diaphragmatic type*. This is, moreover, the characteristic of uræmic respiration in general; it is almost exclusively diaphragmatic. The *costal type* is seen only in uræmic patients who have at the same time material lesions of the lungs or heart. The simple dyspnœa of uræmic patients is sometimes accompanied with laryngeal phenomena, hoarseness of the voice and inspiratory sibilance, which may even simulate serious obstructive disease of the upper air-passages, so as to seem even to call for tracheotomy.

The *paroxysmal dyspnœa* of the uræmic has been long known as the *Cheyne-Stokes* respiration. It consists in the succession, regular and periodical, of a phase of apnœa or pause, and of a phase of dyspnœa in which the inspira-

tions, at first infrequent, short and superficial, augment gradually in amplitude, become more and more frequent, profound and noisy, then decrease progressively to another pause. The period of apnœa is generally limited to thirty or forty seconds; the complete cycle has a duration of several minutes. The circulation is always more or less embarrassed, the lips are cyanosed; the pupils are contracted during the pause, to become dilated when the respiratory movements are resumed; the psychical faculties are more or less obtuse. Apart from the probable influence of cardiac steatosis and certain organic cerebral affections in occasionally causing this form of dyspnœa, it is generally renal and uræmic in its origin, and one or two energetic purgatives often suffice to cause it to disappear for a time.

Spasmodic dyspnœa resembles much spasmodic asthma, and hence has been often described as *uræmic asthma*. It comes on suddenly, like an attack of purely nervous asthma, and generally without any appreciable exciting cause. It consists in the sensation of a distressing anguish, which obliges the patient to sit up in bed, to cling hold of surrounding objects, and to make painful efforts to breathe. The ordinary description of an asthmatic attack is here applicable only during the relaxation phase; expiration is slow, prolonged, but not wheezing; rarely sibilant and sonorous rhonchi are audible to auscultation, and the paroxysm is not followed by expectoration. Vomiting often precedes or follows the attack; the latter may last half an hour or even an hour and be repeated several times during the day and night.

Uræmic dyspnœa is, in general, much benefited by the exhibition of drastic purgatives.

The *circulatory disturbances* observed in uræmia consists in palpitations more or less intense of the heart or even of the blood-vessels. These irregular and intermittent palpitations are felt during rest, and are often aggravated by movement. They are a frequent cause of insomnia. The pulse is ordinarily accelerated during the crisis of uræmia, although it may be preternaturally slowed, as before puerperal or scarlatinal convulsions; here we should interpret the phenomenon as due to a perturbation in the innervation of the vagus.

The *cerebral accidents* of uræmia affect the three great functions of sensibility, movement and intelligence, which are singly or simultaneously disturbed.

The *sensory disorders* consist in subjective sensations of pruritus, of numbness and of pain in different parts of the body; lastly, in temporary visual disturbances.

The *pruritus* is especially observed in patients whose renal lesions are dependent on generalized arterio-sclerosis; and as this latter alteration is always linked to troubles of the innervation, we may well ask if the itching is not rather the effect of the general morbid state which engenders the renal affection than of this affection itself. These itching sensations have for their more special seat the genital organs. Other morbid sensations are those *formications* and *pricklings of the limbs* which are observed especially in arterial nephritis, and which may be due to an imperfect sanguineous irrigation.

The only *articular* pains which it is possible to ascribe to uræmia are those erratic, flitting pains of the Brightic, and which yield to purging; these evidently originate in the nervous system, and not in any material disorder of the joint. To the same category belong those painful *cramps* of which some patients complain, and which are seated preferably *in the muscles of the leg*.

The *digitus semi-mortuus* phenomenon (the dead-finger sensation), which some ascribe to uræmia, is a symptom common to the neuropathic and atheromatous.

Cephalalgia is an ordinary symptom of uræmic poisoning, and appears in the form of a simple headache, or of pains which bear a great resemblance to migraine. The first of these forms is continuous, with paroxysms which may come on in the daytime, but oftener supervene in the night. Moreover, nocturnal exacerbations are almost pathognomonic. The pain has for its seat sometimes the frontal region, sometimes the occipital, and reveals itself by a sensation of horrible discomfort, of weight, of pressure, rather than of painful lancinations. It is rarely located in the temporal region; oftener it occupies the entire head, and is compared to a hoop encircling and compressing the cranium, or a tight and heavy helmet. The intensity of the headache (causing outeries), joined to the nocturnal paroxysms, reminds one of the osteocopic pains of syphilis. If in doubt, the result of treatment will sometimes clear up the difficulty; the antisiphilitic treatment (iodide of potassium, minute doses of calomel) will be found inefficacious, while a few purgative doses of Carlsbad salts will give speedy and magical relief. The *migrainous* form is intermittent, and supervenes by a crisis of duration which varies from several hours to several days. Sometimes unilateral, it is oftener frontal. The pains are of a rending, grinding, crushing, compressing character; arterial beatings (aggravating the

pains) and lancinations (so common to migraine) are rarely complained of. The pain is exceptionally accompanied with nausea and vomitings.

Vertigo is quite often observed in uræmia; it is not always, however, due to uræmic poisoning, being frequently dependent on a morbid state of the cerebral arteries.

Amaurosis sometimes accompanies the uræmic crisis, appearing suddenly at the onset, continuing through the attack, and disappearing with it. Vision is obscured or even almost abolished; objects appear as through a mist. It is the result of a simple functional disturbance. Diplopia, hemiopia and even hemeralopia have also been noticed.

Cophosis is also an occasional symptom of uræmic poisoning.

The *motor disorders* of uræmia are less complex than the sensory. They manifest themselves under the form of contractions, convulsions, and even of paralyzes.

Contracture is relatively rare. In the majority of cases, when present, it is fugacious and associated with a transient paralysis or with eclamptic paroxysms. When isolated, it is generally localized in the muscles of the back of the neck, causing a stiffness and a slight bending backward of the head; this is frequently strongly suggestive of meningitis.

Convulsions represent the most common type of the motor disorders of uræmia. They are partial or general. Partial convulsions consist in muscular twitchings, subsultus tendinum and convulsive shocks resembling electric shocks. General convulsions strikingly resemble the epileptic seizure; they are known under the name of uræmic eclampsia, of which puerperal convulsions are the type. Uræmic eclampsia with general convulsions is exceptionally met with in interstitial nephritis linked to general atheromasia, while at the same time persons suffering from this form of nephritis form the majority of the uræmic

Uræmic paralyzes affect generally a great number of muscles, and are confined to one half of the body (uræmic hemiplegia). They ordinarily appear in the course of nephritis dependent on arterio-sclerosis. This kind of paralysis succeeds a pseudo-apoplectic attack. The case is supposed to be one of cerebral hemorrhage; but if the patient dies, the autopsy discloses only atheroma of the vessels of the encephalon. When the patient survives the attack, he is found to be hemiplegic; but to the surprise of his medical attendant this "wears off" after a few days;

the patient regains perfectly the use of his members. Later on there comes another attack on the same side or on the opposite side. Such pseudo-apoplectic attacks are not rare in aged persons affected with arterial nephritis. Raymond, Chantermesse and Tenneson, besides Lancereaux, have reported cases of the kind.

Aphasia is rarely witnessed in uræmic poisoning; when supervening, it appears at regular or periodical intervals, and is transitory.

Uræmic coma is relatively common. It is generally associated with other uræmic manifestations; it succeeds convulsions and frequently accompanies paralyses; but in some cases it remains isolated, constituting the sole disorder. There are all grades in the depth of the somnolence; sometimes the patient lies in a state of semi-consciousness for entire days, replying in monosyllables when spoken to in an earnest tone of voice. Seated in his arm-chair or lying in bed, generally a prey to a painful dyspnœa, the patient utters complaints or groans when he awakes, and speedily relapses into his hebetude.

At other times the coma comes on suddenly, and is much more pronounced. The patient is struck down with an apoplexy, and becomes insensible to all excitations; his face is pale, the pupils are immovable, the pulse is slowed, the respiration irregular, sibilant or stertorous, sometimes puffing. Muscular resolution is then general, the limbs when raised fall back flaccid, as if they were paralyzed. Death may take place during a first attack. (Edema of the cerebrum is sometimes met at the autopsy, but it may be lacking; or the patient may come out of his coma, manifest some hebetude and obtusion of the intellectual faculties, but respond to questions and take nourishment; then, after a few hours, a day or two, or even several weeks, he again lapses into the same apoplectic inertia, and may have several such attacks before he dies.

The diagnosis is always difficult in cases of this kind. The absence of reflexes speaks in favor of uræmia. The examination of the urine and the state of the temperature have a great semeiological importance and a real value from the point of view of prognostic and therapeutic indications.

Uræmic madness or delirium is a rare symptomatic manifestation of renal insufficiency. When it makes its appearance it is generally in the course of interstitial nephritis, especially of that form which is dependent on arterio-

sclerosis. Uræmic delirium has, however, been witnessed in scarlatinous nephritis, and it is probable that many observations of puerperal mania belong to this category.

When uræmic delirium is associated with other troubles, nervous or digestive, it is habitually mild, calm and transient, rather than noisy and persistent; hence it may pass unperceived, and generally it has but a secondary importance. If, on the contrary, this accident is the predominant phenomenon and sums up in itself all the uræmic disorders, it is more pronounced, and presents particular characters which it is absolutely necessary to know well. In fact, it is not enough that there should be delirium and a renal lesion to constitute *uræmic insanity*; this delirium should have a special behavior which distinguishes it from other forms of delirium. Rarely it bursts forth all at once; almost always it is preceded by insomnia, change of disposition, by melancholy or by impatience, by headache or dyspnœa, or other signs of urinary insufficiency. It is active, boisterous, rather than depressive; hence its type resembles acute mania.

Hallucinations, when they extst, affect sight or hearing, and are rather terrifying than gay. The patients believe that plots are formed to injure them, to poison them, and in certain cases they refuse all food.

Uræmic delirium has remissions and paroxysms—rarely a uniform and continuous progress. It may last for months, but its duration is ordinarily shorter—a few weeks or only a few days; and, like the convulsions and coma of uræmia, it generally kills the patient unless it is met by the appropriate treatment. Patients affected with it have frequently been sent to asylums and put under restraint. This is bad practice, and may be followed by fatal results.

Uræmic delirium presents serious diagnostic difficulties, arising from the morbid predispositions which, in an albuminuric patient, as in any other person, may be awakened by various exciting causes. It is conceivable that an alcoholic patient affected with renal lesion may be taken with a delirium absolutely foreign to this lesion. It is the same with an individual who has antecedents of insanity in his family; hence it is important to have clearly in mind the characters of *uræmic insanity* if one would arrive at a correct diagnosis. These characters may be summed up as follows: Appearance of the delirium generally after well-known uræmic phenomena; maniacal exaltation with general incoherence, which may disappear at the end of several

days or end in a dementia of short duration, in coma, or, lastly, in death. We have here, then, a grave disorder, which we should know how to diagnosticate in order to treat it properly and to avoid the disaster of committing to an asylum the unfortunate victims of this form of mental alienation.—*Jour. Nerv. and Ment. Dig., May, 1891.*

Diphtheritic Laryngitis—Intubation—Trypsin.

In a paper by Dr. S. L. Ledbetter, of Birmingham, Ala., read during the recent session of the Alabama State Medical Association, in Huntsville, he gave a report of seven cases. These were all cases in which he was called to operate. Intubation was done in six. Two of these were not relieved of the dyspnoea by the tube, and the tube was at once removed and reintroduced. Failing to get relief from the second introduction, the tube was again removed. In one instance no other operative interference was attempted; in the other, tracheotomy was performed, the child having become suddenly asphyxiated. Respiration was re-established, and the child, which was apparently dead for several minutes, lived thirty-four hours, and died from extension of the disease to the bronchi.

Of the four cases in which the tubes remained in the larynx, one recovered. The seventh case, in which an operation would have been necessary, but at critical period; the membrane was dislodged twice by emeses, and once by passing a probang into the larynx armed with absorbent cotton and saturated with a solution of trypsin. In the two cases which recovered—one with an operation and one without—the use of steam inhalations was used persistently; trypsin locally, and bichloride of mercury internally. In none of the other cases was the same medication used with the same degree of thoroughness. The relative merits of different therapeutic measures was discussed, and the advantages and disadvantages of intubation as a means of tiding the patient over the critical periods of the disease, were briefly considered.

The writer tested the solvent power of the *trypsin* solution by placing a large piece of diphtheritic membrane in it. At the end of two hours there was no trace of membrane left—demonstrating conclusively that it would be a very efficient remedy if the membrane could be kept sufficiently saturated with the solution.

Experimental and Clinical Observations upon the Therapeutic Value of Salicyl-Bromanilid. ("Salbromalid, or "Antinervin.")

Dr. C. S. Bradfute, Demonstrator of Therapeutics, Jefferson Medical College, Philadelphia, Pa., says (*N. E. Medical Monthly*), that among the new remedies lately introduced from Germany, there is one from Radlauer's laboratory, a synthetical compound, to which he has given the name "*antinervin*," or, with a view of indicating its chemical composition, "*salicylbromanilid*." The former is its proprietary title. It is a combination of bromacetanilid and salicylanilid, and is claimed to possess the virtues of antifebrin, bromine, and salicylic acid, without their unpleasant effects, and is, consequently, an antipyretic, and anti-neuralgic and anti-nervine. It is a white, crystalline powder, having a rather pleasant, slightly acid taste, feebly soluble in water, alcohol and ether. The dose is from three to ten grains, and is best given in the form of compressed tablets or in simple powders.

Dr. Bradfute suggests that its chemical name be abbreviated, as it seems unnecessarily long; it could be easily called "*salbromalid*," which would accomplish the object of brevity, and, at the same time, sufficiently indicate the chemical nature of the compound.

A glance at the physiological action of the three agents comprising salicylbromanilid, shows that they are essentially circulatory depressants. Salicylic acid acts directly on the heart muscle, lessening its electro-contractility, and, when administered in toxic doses, causing the organ to stop in diastole. After a preliminary period of stimulation, it depresses the vaso-motor centers. Antifebrin acts very similarly, though its effect upon the heart and vessels is more powerful, producing a rapid fall in the blood-pressure, and a weak, irregular heart. Bromine, in addition to its impression upon the heart and vaso-motor nervous system, lowers the vital activity of the centers in the *medulla oblongata*, and interferes with the function of conscious cerebration in a way not quite yet understood.

It can thus be seen that a compound made up of these three substances, when given in full physiological doses, would probably exhibit an action upon the system manifested by a profound interference with the motor mechanism of the circulatory apparatus, and that whatever therapeutical value could be attached to it, from a pharmacological standpoint, would depend upon this action.

In a series of experiments conducted in the therapeutical laboratory in the Jefferson Medical College, Dr. Bradfute's observations were confirmatory of the above remarks. He found "antinervin" a profound depressant of the circulation, and a prompt antipyretic. Three grains injected into the lymph sac of a medium-sized frog, produced death in one hour without convulsions, the animal becoming languid and indifferent to mild stimulation after the lapse of ten minutes, and passing rapidly into stupor, finally died in a condition of coma with the muscular system completely relaxed. The reflexes greatly diminished during the course of the poisoning, and were totally absent eight minutes before the cessation of the circulation.

A similar quantity was injected into a frog so prepared that the movements of the heart could be observed *in situ* and the capillary circulation watched under the microscope. The cardiac cycle was observed to gradually and uniformly become longer, the contractions lessened in vigor, the ventricles contracted more slowly than the auricles, reacting lazily to an electric current, and finally the heart stopped in diastole, spreading out like mush when removed from the body and placed upon a glass plate. The capillaries dilated, slowly and irregularly at first; but fifteen minutes before death, relaxed entirely, and the blood current diminished in rapidity in proportion to the capillary paresis and the cardiac depression, the corpuscles tumbling along against each other and showing a tendency to adhere to the vessel wall. Death occurred in forty-six minutes.

The behavior of the heart in the above experiment indicated the poisonous effect of the drug directly upon the organ; but in order to prove this, the heart of a healthy batrachian was taken out of the body and placed in a Kronecker-Bowditch apparatus. Here, removed from the influence of the central nervous system, a solution of "antinervin" was permitted to flow, by means of a profusion canula introduced into the ventricle, slowly through the heart, and the results observed were the same as those noted when the heart was *in situ*. A control experiment eliminated any undue influences upon the heart from the damage it sustained in placing it in the apparatus.

Upon the rabbit, the drug acts very much the same as upon the cold-blooded animal, and its influence over the respiratory movements, which is more distinct in warm-blooded animals, shows the part played by the salicylic acid in the general result. Respiration became rapid, weak, shal-

low, and stopped before the heart, the latter becoming slower and more feeble, and finally, a few minutes before the circulation ceased, would make no impression upon the drum of a cardiograph.

Guided by these experiments, Dr. Bradfute concluded that salbromalid was best applicable to those affections characterized by functional disturbances of the circulatory system brought about by reflex impressions or too active stimulation, and acute inflammatory conditions occurring in robust subjects. In the cases that fell in his hands he found this conclusion correct, and noted favorable results, and in some instances obtained curative effects when other remedies had failed, or acted unsatisfactorily.

The following are a few of the cases in which he employed the remedy; and while they are not conclusive in establishing the therapeutical position of the drug, they may be accepted as indications for its administration.

CASE I.—*Angina pectoris*. Male, aged 36; laborer. Has attacks of angina pectoris about twice a month. During paroxysm face is pale, extremities cold, arterial tension high, and pains so excruciating as to cause at times symptoms resembling acute mania. Ten grains of salbromalid caused relief of symptoms in about twenty minutes, and three grains every two hours afterwards prevented a recurrence of the paroxysm. The results were, of course, not permanent, as the patient still has attacks as frequently as ever, but the drug never fails to check a paroxysm.

The writer adjoins a caution here in administering this drug in angina pectoris. It should not be given in asthenic cases, and there must always be at hand ammonia and strychnine to combat a failure in the circulation. A thirtieth of a grain of the latter hypodermically, if the heart shows signs of ceasing work, is the proper dose.

CASE II.—*Typhoid fever in second week*. Male, aged 23; clerk. Temperature 104.4° F.; pulse 100; respiration, 24. Five grains of salbromalid reduced the temperature to 102.3° F. within one hour and a half. No bad results followed.

Only one dose was administered to this case, as cold sponging was sufficient to retain the temperature within safe limits, and it was not deemed advisable to tamper with a weak typhoid circulation.

CASE III.—*Brachial neuralgia of two week's duration*. Female, aged 32; type-writer. Pain paroxysmal. Three grains of salbromalid, administered every three hours, caused the pain to disappear within twelve hours. This dosage was

continued four days, and afterwards a course of arsenic and diet affected a permanent cure.

This patient was robust, but of a neurotic temperament, and the neuralgic pain was evidently spasmodic in character.

The following case presented the converse condition and it will be noticed that the drug was ineffective.

CASE IV.—*Brachial neuralgia of three years' duration, probably rheumatic.* Man, aged 41; engineer. In fair physical health, with a rather stolid, morose disposition. Suffers more or less continuous dull pain in left axillary and brachial regions, with occasional exacerbations. Ten grain doses of salbromalid depressed the circulation but exercised no appreciable control over the pain.

CASE V.—*Acute inflammatory rheumatism.* Female, aged 37; cook. Temperature 104° F.; pulse 108; respiration 26. Five grains of salbromalid reduced the temperature to 103° F., and diminished the general sense of discomfort and uneasiness. It was repeated in four hours, with the result of further reducing the temperature, but, also, of markedly depressing the circulation, and it was not again administered, as the patient developed pericarditis in a severe form on fifth day. In this case the remedy would, undoubtedly, have acted better if it had been given in smaller doses.

Radlauer claims antinervin to be anti-diabetic, but in one case of diabetes, in which the writer had the opportunity of employing it, no diminution was observed in the amount of water and sugar excreted; but, of course, one trial cannot be accepted as conclusive evidence of its inutility in this affection.

It is seen from what has been stated, that salbromalid is most effective as a pain reliever and antinervine in those functional disturbances of the circulatory system which occur at the onset of acute diseases, and in some other conditions, manifested by an overacting heart and contraction of the arterioles, which lessen the total area of blood space, and that it is most effective in robust subjects. Its power to reduce the temperature is undoubted, but owing to its action upon the heart it should be given carefully in states of hyperpyrexia, especially the low fevers.

Toxicology of Exalgine.

A French provincial practitioner records a case of poisoning by an accidental overdose of exalgine, which constitutes an important contribution to the toxicology of this

rival to antipyrin. He prescribed four powders containing a gramme (about fifteen grains) of antipyrin in each, to be taken at stated intervals. The next day he was urgently summoned to the patient, who was reported to have gone mad. He found the patient suffering from intense vertigo, crying out that he was falling over a precipice, and there was in addition extreme dyspnœa and very marked cyanosis. It was elicited on inquiry that the chemist's assistant had dispensed four one gramme packets of exalgine in mistake for antipyrin, so that the patient had two doses of a gramme each of exalgine on two consecutive days. The same symptoms were produced on both occasions, but the interesting features is the fact that they passed off in a few hours without leaving any permanent ill-effects behind, although the drug, on being tested, proved to be of usual strength and quality. This tends to show that the unpleasant symptoms which are reported to have occasionally followed doses of five grains must be devoid of any real danger, seeing that prompt recovery followed doses which may fairly be described as colossal.—*Med. Press*, May 6th, 1891.

Therapeutics of Papain.

The uses to which the so-called digestive ferments can be put, seem to be increasing, more particularly in regard to papain, the vegetable ferment obtained from the juice of *carica papaya*. As a remedy in indigestion it has the unquestionable advantage over similar bodies of animal origin of carrying on its action in an alkaline, an acid, or a neutral medium indifferently. Its action on food is, therefore, not limited to any particular region of the alimentary canal, but continues as long as there is food to be acted upon, whether in the stomach or intestines. Its action on diphtheritic exudative membranes again is extremely interesting, and since it has been demonstrated bacteriologically that the specific bacilli thrive and multiply therein, the propriety of removing the membranes as they form, has been established on specific basis. Hence the *solvent action of papine on diphtheritic membranes* is a valuable addition to the resources of the practitioner in dealing with this disease, for it is not only more promptly effectual, but is free from the suffering which is caused by the brutal practice of removing the exudation by violent rubbing or *grattage*. The subjacent mucous membrane is thus denuded and rendered accessible to local treatment of another kind, and the throat is prevented from continuing to be a focus for the elabora-

tion of the diphtheritic poison. Still more recently these dissolving properties have been turned to account for the elaboration of the diphtheritic poison. Still more recently these dissolving properties have been turned to account for the purpose of bringing about the *arrest of growth, and even the retrogression, of malignant neoplasms*, and although this plan of treatment has not yet received official sanction, it is claimed to have yielded good results in the hands of competent observers, and it is sure to be admitted to the test of practical experience. These bodies belong to a class of agents in respect of which the scientific chemist is significantly silent. The property which they possess of causing chemical change in bodies with which they come into contact without the ratio of quantity and effect which obtains elsewhere in the chemical world without themselves undergoing any change, is a curious and hitherto unexplained phenomenon. It is not improbable that in the future these powerful quantities may find a much wider application in therapeutics than is at present the case, and the benefits should be commensurate with the intensity and comprehensiveness of their effects.—*Med. Press*, May 6th, 1891.

Pancrobin for Constipation.

In a paper read last September before the North Central Ohio Medical Society, Dr. R. Harvey Reed, of Mansfield, Ohio, said (*Amer. Lancet*) that this combination of pancreatin and bile (manufactured by Reed & Carnick, of New York) has gradually engrafted itself into his good graces, and is becoming more and more permanent the longer he uses it. It is on the market in the form of a liquid, and also of pills. He prefers the pill form. Where there is a diminished quantity, or absence of these natural products, especially bile, resulting in the distressing complication of intestinal or duodenal indigestion, this preparation is of decided value by assisting the intestinal digestion until the normal functions of the liver and pancreas, but especially the former, could be established. In constipation attended with flatulence, the result of an inactive liver, this remedy is of great value, promptly relieving the flatulence, and producing natural colored stools of a normal consistency, in place of the pale ash-colored fæces, or the dry, hard scybala, of the chronic dyspeptic. In a variety of cases of constipation resulting from congestion of the liver, and in cases of atonic condition of the coats of the bowels resulting in in-

testinal indigestion, he knows of no two remedies that will give as prompt relief to these conditions as pancrobilin and cascara sagrada.

In the one class of cases, pancrobilin supplies the intestine with an artificial supply of bile and pancreatin, which digests the food that otherwise would not be digested, thus giving relief until the real difficulty with the liver can be overcome. In the other cases, cascara sagrada tones up the intestine, increases the secretions, which in turn facilitate digestion, and relieve the constipation.

Urethane in Urine of Bright's Disease—the Cause of Uræmic Poisoning.

Dr. C. J. Rademaker, of Louisville, Ky., (*Amer. Pract. and News, May 9th.*) says that in examinations of large quantities of albuminous urine he has always met with a crystalline organic compound soluble in water, ether, chloroform, alcohol, and benzol, and almost insoluble in petroleum ether. This organic compound, differs from all the constituents of normal urine, and can be readily isolated by the following process: Evaporate several liters of albuminous urine to dryness on a water bath, and extract the residue with 98 per cent. alcohol, and filter. Allow the alcoholic solution to evaporate at a low temperature. Treat the oily residue with dilute sulphuric acid and extract with ether; allow the ether to evaporate spontaneously. The residue contains urethane in an impure state. Dissolve the residue in distilled water, and filter from the oily matter. Treat the filtrate with carbonate of potash to an alkaline reaction and again extract with ether, the ether allowed to evaporate and the residue placed in an exsiccator over sulphuric acid, when gradually crystals in the form of plates separate. These crystals are dissolved in distilled water, and the solution treated with a solution of subacetate of lead, the excess of lead being removed with carbonate of soda and again extracted with ether. If now this ethereal solution is allowed to evaporate spontaneously, it leaves urethane in a pure state. If a solution of these crystals is boiled with NaOH, ammonia is evolved, showing the presence of nitrogen. If this alkaline solution is treated with an acid, CO₂ is evolved.

Urethane is a powerful narcotic, and Dr. Rademaker advances the theory that to this substance the so-called "uremic poisoning" in Bright's disease is due.

Treatment of Malignant Neoplasms Not Amenable to Operation.

Prof. v. Mosetig-Moorhof, of Vienna, states (*Wiener Med. Presse* 6, '91, as quoted by *Pittsburg Med. Rev.*, May, 1881,) that he had employed all recommended remedies for years without noteworthy results. But he kept in mind that the pathogenic cell-elements possess decidedly inferior biological potency to the healthy tissue elements—pointing to the possibility of making active warfare upon the neoplasm without affecting the surrounding healthy tissue. Proliferation of the pathological cell-elements, upon which the growth of the neoplasm depends, occurs from the nucleus of the mass. Hence, Mosetig thought, to concentrate treatment upon the proliferating nucleus would arrest the process, and even induce retrograde metamorphosis. This led him to stain the neoplastic tissue—an easy task—by filling it with aniline dye freed from arsenic. His first experimental case was a man, age 50, with an orange-sized, round-cell sarcoma, in the inguinal region, which several prominent Vienna surgeons pronounced unfit for operation. Mosetig injected one gram of a one per cent. solution of *aniline trichlorate* into the sarcomatous mass. After eight weeks' treatment, the tumor diminished to size of a hickory-nut, with a healthy cicatrix at the site of the ulcer, and the patient was discharged decidedly improved. A year later, the man died of pneumonia, *without even a sign of recurrence* of the growth. Mosetig employed aniline trichlorate in three other cases, but was obliged to discontinue its use because of unpleasant effects in other directions.

A year ago, two new dyes—*methyll-violett* and *pyoktannin*—were introduced, and said to be perfectly harmless by Prof. Stilling. Mosetig selected a lady, age 60, with a *sarcoma of inferior maxilla*, size of a fist, filling the oral cavity, and forcing the tongue up against the hard palate, so that she could neither speak nor swallow. The growth was injected with *methyll-violett* solution 1:500, which was increased to 1:300. In all, 35 injections were given of from 3 to 6 grams of solution at each sitting. Then the growth had shrunk so that only a portion of the interosseous enlargement remained, and the patient was free of suffering. Up to his writing, no malignant disposition is manifest.

Five other cases—*cysto-sarcoma of sterno-clavicular joint*, *papilloma of urinary bladder*, *sarcoma of peritoneum*, and two *carcinomata of cervical glands*—have all done equally well

with methyl-violett injections—all being decidedly improved, with possible absolute cure in the near future. Tumors not suppurating do not degenerate, but simply shrink together in retrogressive metamorphosis; while such as are ulcerated and discharging pus for a time suppurate more freely, after which, with some diminution in size, they cicatrize rapidly.

The injections are repeated every two or three days, and made under strict aseptic precautions. Thus far, Mosetig has employed solutions of the strength of 1:1000, 1:500, 1:300; and he is of opinion that much stronger solutions may be used without danger.

Retinol—A New Solvent and Antiseptic.

In several recent communications Dr. F. Vigier calls attention to retinol, which promises to be as valuable an addition to our pharmacopœa as vaseline. This substance was discovered by Pelletier and Walter in 1838, but remained without any special medicinal application until 1890, when Balzar used it successfully in the treatment of blennorrhagia and in syphilitic and varicose ulcers of the leg. His pupil, Barbier, continued his studies and made them a subject of an inaugural thesis.

Retinol is prepared by the destructive distillation of rosin by heating rosin in an iron retort. When rosin is thus acted upon, four principal bodies come off—*retinpathe*, isomeric with toluene and benzoene, boiling at 108°C ; *retinyle*, isomeric with cumene, boiling at 150°C ; *retinol*, which boils at 238°C ; and *metanaphthaline*, isomeric with naphthaline boiling at 235°C .

Retinol has a formula of $\text{C}_{35}\text{H}_{16}$; its density is 0.900, and is of a brown or yellow color, depending upon whether it is prepared from brown or yellow rosin. Both possess the same solvent and therapeutical properties, but the yellow preparation is preferable. Retinol is of an oily consistence, greasy, slightly bitter, of a slightly acid reaction due to traces of pinic acid; the odor is faint and peculiar, approaching that of the fir tree; and it burns with a fuliginous flame.

The solvent power of this substance is remarkable, and in addition to this it is unirritating, antiseptic and desicative, and exhibits no tendency to become rancid or in any way decompose. It is, therefore, singularly adapted for a large number of pharmaceutical purposes. Among the substances dissolved by it are: salol, 1-50; naphthol, 1-50;

aristol, 1-50; camphor, 1-20; chrysophanic acid, 1-40; cocaine, 1-30; codeine, 1-40, and strychnine, 1-40. It is miscible in all proportions with oil of juniper, carbolic acid, turpentine, alcohol and ether. Resorcin, if dissolved in glycerine, may be mixed with retinol, and so may iodoform if dissolved first in a little ether. Iodol is dissolved, but soon precipitates as a resinous mass. Phosphorus is also dissolved and the solution remains unchanged indefinitely. Retinol mixes readily with fats, oils, vaseline, lard, lanoline, glycerine, cocoa-butter, etc., and is thus susceptible of use in the preparation of a vast number of ointments. In cases where a liquid is not undesirable, retinol, owing to its antiseptic properties, can, with great advantage, replace these bodies. Preparations can be made in the form of ointments, solutions, capsules, etc. Vigier exhibited to the Société de Médecine Pratique capsules of retinol-salol, retinol-creosote and pure retinol.

It has already afforded in therapeutics most satisfactory results, and in a large variety of diseases. Deserenes and Barbier have experienced great satisfaction from its use in otology and rhinology, more particular in purulent otitis, and to favor the expulsion of mucus and overcome the nauseous odor in atrophic rhinitis. In such cases it can be applied by injection, with a brush, or on a wad. In gonorrhœal vaginitis, tampons soaked with retinol give very quick results, and a cure within twelve or fifteen days. In gonorrhœa in man the injection of retinol gives immediate relief and acts on the discharge better and more rapidly than any other substance employed up to this time. In both affections it acts as an antiseptic and insulating body and is also valuable because it causes no pain and is well supported.

Phosphorated-retinol has been used with great satisfaction in the treatment of cases in which phosphorus was indicated. Vigier refers to over two hundred observations made by Kassowitz, in the treatment of rachitis and scrofula; and to cases of anæmia, chlorosis, dysmenorrhœa, uterine hemorrhages, muscular paralysis, progressive locomotor ataxia, neuralgias, neuroses, hysteria, glaucoma and zona, treated by such men as Delpech, Curie, Guèneau de Mussy, Brocq and Duhring.

Retinol-salol has been used in urinary diseases; retinol-creosote in bronchitis, phthisis, etc.; and pure retinol in gonorrhœa. In ophthalmology, Hubert has found it of great usefulness, especially in gonorrhœal conjunctivitis, and

after injuries or operations. As illustrations of desirable combinations, the following are suggested :

R _y —Retinol	10	grams.	
Lanoline.....	5	"	
Bi-carbonate of sodium....	0.5	"	Mix.
R _y —Retinol.....	10	grams.	
White wax.....	4	"	
Cocoa-butter	6	"	Mix.
R _y —Retinol.....	8	grams.	
Rosin.....	8	"	
Lanoline.....	5	"	Mix.
R _y —Retinol,	} each.....	5	grams. Mix.
Rosin,			
Lanoline,			

The last is of very good consistency. To these formulæ may be added such other substances as may be indicated.

In diphtheria the following combination may be employed as a topical application :

R _y —Retinol	15	grams.	
Naphthol.....	1	"	
Camphor	2	"	Mix.

In blennorrhagia in man it may be employed as an injection, associated with resorcine in the proportion of 3 to 100; and it may also be administered in the form of capsules alone, or in combination with salol, etc.

In diseases of the skin, as psoriasis, the following prescriptions have been found to be good :

R _y —Retinol.....	20	grams.	
Glycerole of starch.....	30	"	Mix.
R _y —Oil of cade,	}	equal	parts. Mix.
Retinol,			

To stop itching this pomade is recommended :

R _y —Naphthol B.....	5	grams.	
Retinol	50	"	
Soft soap	50	"	
Prepared chalk.....	10	"	Mix.

In conclusion, the following may be considered the chief points of recommendation for this substance :

1. It possesses remarkable solvent powers; it is not altered by time or light; it is an excellent and permanent antiseptic; its local application does not give rise to pain or irritation; it is very cheap; and, finally, it unites by solution or simple mixture with a large number of the most

important substances employed in therapeutics. These ceratinly are sufficient to justify the belief that retinol will soon render important and extensive service as an antiseptic excipient.—*Med. and Surg. Rep.*, May 16th.

Treatment of Fissured Nipples and Engorged Mammary Gland.

Dr. B. C. Hirst says (*Univ. Med. Mag.*, April, 1891,) that painting with tincture of benzoin is excellent for small superficial cracks of the nipple. But in bad cases, an ointment of equal parts of castor oil and subnitrate of bismuth applied to the fissures—previously cleansed and disinfected—relieves pain, protects the parts, and heals the cracks. It is not necessary to wash off this ointment when the child is given the breast, as must be done if tannic acid, lead solutions, etc., are used. For the engorgement and mammary pain often accompanying fissured nipples, an application on cloth over the whole breast of lead water and laudanum renewed at frequent intervals and kept in place by a suitable mammary binder, gives excellent results—making mammary abscess a rare event. If the child will nurse the healthy breast alone, it is safer; but if the child must nurse the cracked nipple, employ a glass-nipple shield with a rubber tip.

Surgery of the Liver.

A writer states (in *London. Med. Rec.*, as quoted by *Weekly Med. Rev.*, May 23,) that until recently surgeons greatly feared making even a simple puncture for hepatic abscess; much more making a resection of a portion of the liver; and that Lawson Tait and Langenbech were the first to practice opening and draining the gall-bladder. Dr. Terrillon became convinced by experiments on animals that such fear was unnecessary, and has since done a great deal of hepatic surgery. The following are his conclusions (*Bull. Gen. de Therap.*, Feb. 15, 1889,) drawn from nine personal observations of the more serious operations he has performed on the liver:

a. The surgery of the liver only demands a few special precautions, which can be easily taken. Punctures into this organ are harmless, with ordinary antiseptic precautions.

b. The gall-bladder may always be opened and drained. This operation is known as cholecystotomy. All that is necessary is a simple, careful opening of the peritoneum. Calculi may either be removed or more or less decorticated,

according to the case. If the bile-duct be obstructed, opening of the gall-bladder will be simply a palliative, but when it is permeable, cure is rapid; no fistula has been observed to persist after the operation. Cholecystectomy, on the other hand, can only be performed with impunity in very exceptional cases. Its utility is, besides, questionable, since simple incision, with drainage, gives equally good results.

c. Ablation of a portion of the liver is rendered harmless and easy if hæmorrhage be prevented by the use of an elastic ligature placed at the limit of incision, between the healthy and diseased parts.

A Very Dangerous Impurity in Phenacetine.

Dr. C. O. Curtman, of St. Louis, a few days ago received a letter from Dr. Ludwig Reuter, of Heitzerberg, (communicated to *Weekly Medical Review*, May 16th,) announcing a very dangerous impurity of phenacetine—a residuum in the process of its manufacture by the Baker Color Works. In its manufacture, phenacetine has to pass through the stage of *paraphenacitinide*, which is a very powerful poison. It is the result of imperfect conversion into phenacetine by means of acetic acid, which completes the process. It is easily discovered by placing a small quantity of chloral hydrate in a test-tube, melting it at the heat of boiling water, and then adding one-fifth of phenacetine to it. *If it is pure*, the mixture will remain colorless, forming a diffused mass. *If it is impure*—if it is phenacitinide, it will become of a purple color, passing from red into blue within a very short time—a half minute. In a number of instances recently treated in Heitzerberg, this impurity was found in the phenacetine prescribed—producing inflammation of the kidneys, many cases being very severe.

R for Obstinate Ringworm of the Body.

A writer in *Medical Chips* says that the application by painting over the affected parts once a day with the following, for two or three consecutive days, will generally prove successful:

R.—Hydrarg. bichloridi.....gr.ij.
Tinct. benzoin comp.....ʒj.—Misce.

As this mixture is toxic, be careful not to paint too large a surface; nor should it be applied if excoriations exist, as it would irritate the wounded integument.

Book Notices.

International Clinics. *A Quarterly of Clinical Lectures on Medicine, Surgery, Gynæcology, Pediatrics, Neurology, Dermatology, Laryngology, Ophthalmology, and Otology, by Professors and Lecturers in the Leading Colleges in the United States, Great Britain, and Canada.* Edited by JNO. M. KEATING, M. D., and J. P. CROZIER GRIFFITH, M. D., of Philadelphia, and J. MITCHELL BRUCE, M. D., F. R. C. P., and DAVID W. FINLAY, M. D., F. R. C. P., of London, England. April, 1891. Philadelphia: J. B. Lippincott Co. 1891. 8vo. Pp. 357. Cloth, \$2.75. Half Leather, \$3.00. Sold by subscription only for four volumes (one year)—not for single volumes.

It seems to us an oversight of the Publishers that they should give the price of a single number or volume, and yet declare, in their advertisement, that they will not sell a volume, but only four volumes (a full year) at a time. Hence, whoever subscribes must remit either \$11 or \$12, according to binding, *for the year*. But we are confident that experience will teach the Publishers the necessity, sooner or later, of so modifying their terms as to sell a single quarterly volume on demand. They will find it a fact that many practitioners will want some definite one or two volumes a year, for which they want to pay, but will be unwilling to buy all four numbers to get simply one number. We predicted the same thing when "Wood's Medical and Surgical Monographs" were begun; and the Publishers of that Series soon found that they had to make terms for each monthly issue.

But whether the Publishers adopt the suggestion given or not, the system of "International Clinics" represented in this first issue (for April, 1891,) shows that the work will be exceedingly valuable to any and every practitioner. We have given the title above so fully in order to show that it will be undertaken in each volume to include some practical lectures by eminent authors in each of the great divisions of practice. In the first volume, now before us, there are 36 distinct lectures on daily important subjects, dealing especially with symptoms, diagnosis, and details of treatment. Wherever needed, engravings, drawings, charts, etc., have been introduced. Every lecture is of value to practitioners. In fact, we think the "International Clinics" comes nearer supplying the exact demand of practitioners of the present day than any other serial medical publication that we are acquainted with.

While the Editors and Publishers are exhibiting great

interest and ability in the issue of these volumes, so as to fully meet demands, it would be an improvement if the index were made a little fuller than in this volume—especially as it is not a systematic work. Thus, "Ludwig's angina," 30; "Hysteria, Traumatic" 232; "Diphtheria of cellular tissue," 300; "Pressure palsy," or "Palsy, Pressure" 227; "Vagina, Cancer of," 189; etc., are a few among the many words that ought to have been indexed for the sake of ready reference.

Practical Treatise on Diseases of the Skin. By HENRY G. PIFFARD, A. M., M. D., Clinical Professor of Dermatology, University of City of New York; Surgeon-in-Charge of New York Dispensary for Diseases of the Skin, etc. *Assisted by* ROBERT M. FULLER, M. D. With 50 Full-Page Original Plates, and 33 Illustrations in the Text. New York: D. Appleton & Co. 1891. Atlas 4to. Pp 157. Library binding. Price, \$15. (Sold by subscription, only by Publishers.)

This magnificently issued volume, through its accurately drawn and colored plates from photographs, furnishes the equivalent of life-pictures of the various skin diseases; while the concise, practical text of description, diagnosis, and therapeutic advice, give to this work a value just short of the advantage of an actual attendance on the part of the doctor upon the clinical lectures themselves. Theoretical and controversial questions are avoided—the effort of the authors being to present to the *general* practitioner the very work they have been so long needed as a clinical help to them in the clear diagnosis and most approved course of treatment of skin diseases. The ordinary fee from a single protracted case of a skin disease would far more than purchase this invaluable work, while its use to the general practitioner would be recognized almost monthly through the whole period of his professional life. We could not too urgently press upon the attention of our subscribers the great value of this excellent atlas photographic work. It includes illustrations and descriptions of all skin diseases that are apt to be met with in a life-long general practice.

Practical Points in the Management of some of the Diseases of Children. By I. N. LOVE, M. D., Professor Diseases of Children Clinical Medicine and Hygiene, Marion-Sims College of Medicine, St. Louis, etc. 1891. Geo S. Davis. Detroit, Mich.

This well-indexed number of "The Physicians' Leisure Library," of 141 12mo pages, paper binding, (25 cents), or

cloth, (50 cents), is an effort "simply to group together a number of practical points pertaining to various disturbances of childhood which have come under the direct notice of the writer." It is a very practical work, and is worth a great deal more than its published price.

The Modern Antipyretics—their Action in Health and Disease. By ISAAC OTT, M. D., Ex-Fellow in Biology, Johns Hopkins University; Consulting Physician to the Easton Hospital, etc. E. D. Vogel, Bookseller. Easton, Pa. 1891. Cloth. 8vo. Pp. 52. (From the Publisher.)

No author in whom the profession has more confidence for the correctness of observations in just such a work as this could have been selected. It would be interesting to present his views as to the cause of fever if we had space. After detailing the chemistry of the modern antipyretics, and discussing how they act in health and in fever, he then describes their therapeutic effects, toxicology, and uses, taking each one up as follows: Kairin, hydrochinon, thallin, antipyrin, antifebrin, phenacetin, exalgin, pyrodin, methacetin para-acetanisdin, antithermin, and antiseptis. In the concluding section on the "Value of Antithermics in Typhoid Fever," he strongly favors water baths.

Treatise on the Diseases of the Nervous System. By WM. A. HAMMOND, M. D., Surgeon-General U. S. Army (Retired List); Late Professor of Diseases of the Mind and Nervous System in College of Physicians and Surgeons of New York, Bellevue Hospital Medical College, University of City of New York, New York Post-Graduate Medical School and Hospital, etc. *With the Collaboration of* GREME M. HAMMOND, M. D., Professor of Diseases of the Mind and Nervous System in New York Post-Graduate Medical School and Hospital, etc. With 118 Illustrations. *Ninth Edition, with Corrections and Additions.* New York: D. Appleton & Co. 1891. Cloth. 8vo. Pp. 932. Price, \$5.00. (For sale by West, Johnston & Co., Richmond.)

The fact that this volume has a few pages less than the previous edition is due to condensation of matter as it there appeared. Chapters have been practically rewritten wherever corrections were needed or advances have been made. There is no one book on nervous diseases in the English language that is comparable to this one as a text-book for the student or as the constant reference-book for the general practitioner. Its value has as high estimate abroad as at home, as shown by the fact that this work has been transla-

ted into the French, the Italian, and the Spanish languages, and is used as the text-book or reference-book in colleges in the foreign countries represented by these languages. While three or four additional chapters are distinctly indicated in the table of contents, it is only necessary to turn to the text pages on almost any subject to see that each subject has been carefully reviewed and brought distinctly up to the present standard of knowledge. As former editions are, no doubt, in the hands of most of the educated class of physicians, it is not needed to say anything in description of the present edition further than that it most nearly represents the ideal text-book on nervous diseases. While thoroughly scientific in its technology and discussion, it, at the same time, is so thoroughly practical as to matters of diagnosis, treatment, etc., that the every-day doctor cannot well be without a copy.

The Pocket Materia Medica and Therapeutics. *A Resume of the Action and Doses of all Official and Non-official Drugs now in Common Use.* By C. HENRI LEONARD, A. M., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Cloth. 12mo. Pp 300. Price, post-paid, \$1 00. The Illustrated Medical Journal Company, Publishers, Detroit.

This volume has been in preparation for the past four years. Drugs of as late introduction as 1891 are to be found in its pages. The author claims to have incorporated everything of merit, whether officinal or non-official, that could be found either in standard works or in many manufacturers' catalogues. The scheme embraces the pronunciation, officinal or non-official indication (shown by an *), Genitive case-ending, common name, dose and metric dose. Then the synonyms, English, French, and German. *If a plant*, the part used, habitat, natural order, and description of plant and flowers, with its alkaloids, if any. *If a mineral*, its chemical symbol, atomic weight, looks, taste, and how found, and its peculiarities. Then the action and uses of the drug, its antagonists, incompatibles, synergists, and antidotes. Then follow its officinal and non-official preparations, with their medium and maximum doses, based, as far as possible, upon the last U. S. Dispensatory. Altogether, it is a handy volume for either the physician, student or druggist, and will be frequently needed if in one's possession. It is the most complete small book on this subject that we have seen.

A Text-Book of Bacteriology. By CARL FRAENKEL, M. D., Professor of Hygiene, University of Königsberg. *Third Edition.* Translated and Edited by J. H. LINSLEY, M. D., Professor of Pathology and Bacteriology, Medical Department of the University of Vermont; Demonstrator of Pathology and Bacteriology, New York Post-Graduate School and Hospital, etc. Octavo. Pp. 380. Extra muslin, \$3.75. New York: Wm. Wood & Co.

Notwithstanding the statement by Dr. Fraenkel that "only such facts and observations have been given as were examined by myself," the fullness of details of this treatise is such as to make it the long-desired text-book on bacteriology. On all points, the author claims that his views "are in complete harmony with those of the master of recent bacteriology," Dr. Robert Koch. The first four chapters covering 158 pages, are taken up with the principles of bacteriology, in which is given a vast amount of detail description about the formation, multiplication, etc., of bacteria, ptomaines, etc.; methods of investigation; methods of breeding, sterilization, etc.; and methods of transmission, special qualities of pathogenic bacteria, Koch's rules for determining them, etc., etc. Chapter V describes "non-pathogenic bacteria;" Chapter VI, "pathogenic bacteria;" Chapter VII investigates "air, soil, and water;" and the Appendix treats of "mould and yeast fungi." A most excellent index is added—without which it would have required much re-reading of pages to find the point sought. This is the book for doctors who are students of causes and effects of diseases, especially those arising from without the body.

Practical Treatise on Electricity in Gynæcology. By ROBT. E. GRANDIN, M. D., Obstetric Surgeon, New York Maternity Hospital; Obstetrician, New York Infant Asylum, etc., and JOSEPHUS H. GUNNING, M. D., Instructor in Electro-Therapeutics, New York Post-Graduate Medical School and Hospital; Gynæcologist to River-View Rest for Women; Electro-Gynæcologist, North-Eastern Dispensary, etc. Illustrated. Octavo. Pp. 180. Muslin, \$2.00. New York: Wm. Wood & Co.

The authors do not look upon electricity as a specific, "but as a valuable adjunct to routine therapeutic methods," in diseases peculiar to women. The first 54 pages are taken up with general considerations and descriptions of batteries, electrodes, etc. They think galvanism contra-indicated in the presence of any especially acute process; but subacute inflammations may be *very cautiously* so treated. But as to faradism, administered through a *vaginal* bipolar electrode,

they regard no agent, short of opium, so capable of alleviating pain associated with an acute inflammatory process; but a *uterine* bipolar electrode had better not be used in an acute process.' They present strong testimony in support of galvanism for destruction of life of the fœtus in ectopic gestation, as preferable to laparotomy in the early stages of the gestation. In the section on electrolysis, Dr. Gunning reports a remarkable case of cure of cancer of the cervix—after eminent practitioners had awarded the patient only a short while to live. Static or frictional electricity is advised when the object is to relieve pain and absorb exudates. Galvano-cautery in the treatment of malignant growths is deemed worthy of further use. In obstetric uterine inertia, in the second stage, the faradic stimulus is very valuable. Dr. Henry D. Fry, of Washington, recommends galvanism for retained secundines after abortion; but it requires more time than the curette in removing them. All in all, this book is truly a practical treatise of great value to practitioners. It is simple in description, accurate in facts, and based on good judgment in its recommendations.

Editorial.

Our Springs Summer Resorts' Advertisements.

Our subscribers are to be congratulated that they have in this issue an advertisement directory of the very best places to which they may send their patients for a summer's rest, pleasure, or for the recovery of health by the use of specially-adapted mineral waters.

Buffalo Lithia, of Virginia, and *Bowden Lithia*, of Georgia, are springs that furnish waters whose therapeutic value is incalculable to the victims of neurasthenic, nephritic and vesical diseases. Indeed the solvent action of Buffalo Lithia water upon renal and vesical calculi formed the subject of a most remarkable clinical record in our January No., 1891, taken from the *New England Medical Monthly*. These Springs have excellent hotel accommodations for visitors.

Of resorts specially adapted to dyspeptics are the *Blue Ridge* and the *Alleghany Springs*, where the tables are well supplied for the appetites of the healthy and hearty, and special provisions are made for the most capricious necessities of the dyspeptic.

We regret the omission in the May advertisement of the

famous *Rockbridge Alum Springs* of the statement that an attractive feature for the season just now opening is the graduated scale of prices, according to location of room and length of stay. The therapeutic virtues of these waters in a large class of gastric and bowel troubles especially has been so well established as to become matters of special recommendation by the Medical Society of Virginia.

Then there is the world-renowned *White Sulphur Springs*, of Greenbrier county, W. Va., where every arrangement is made for the entertainment of pleasure seekers, and for the sanitary comfort of those who may go there for the recovery of health.

Luray Inn is said to be on "the loveliest spot in Virginia," where the student and curiosity hunter can daily visit the "Caverns of Luray," of Page county, Va., and see by electric light the gorgeous splendor of these marvelous creations of nature.

If a season of quiet rest for the summer in a lovely mountain home is desired where social pleasure, a variety of mineral waters, outdoor exercise in mountain air, fishing, etc., are sought, we know of no place better suited for individuals or families than *Dr. Nickell's Sanitarium* at Millboro Depot, Va., but as accommodations are limited, it is proper that early applications should be made.

Dr. Strong's Sanitarium at Saratoga Springs, N. Y., affords all the accommodations of a well-conducted hotel for the pleasure visitor, while, as its name implies, it is also arranged with all the conveniences for the invalid who seeks the therapeutic benefits of any of the remarkable waters at these famous springs.

And when the autumn season comes, compelling those with weak lungs or other chronic diseases to seek a far southern climate, there is no place to which they can more judiciously direct their route than to the *South Florida Sanitarium* at Sanford, Fla., under the medical charge of Dr. Frank H. Caldwell, with able medical assistants and nurses.

Thus it will be seen that our advertising department furnishes information relating to every class of wants of the pleasure or summer rest-seeker, or for those who want to find springs having medicinal virtues specially adapted to their cases. Let the reader examine each of the advertisements referred to and write at once to the proprietors or managers, whose addresses are given, for pamphlets giving detailed descriptions of their places and of the special well-established claims of each.

As for railroad routes, the Buffalo Lithia and the Bowden Lithia Springs are reached by the Piedmont Air Line; the Blue Ridge and the Alleghany Springs are on the line of the Norfolk and Western railroad—one a few miles east and the other a few miles west of that booming Virginia city, Roanoke. Luray Inn in the lovely town of Luray, on the Shenandoah Valley branch of the same railroad. The Rockbridge Alum Springs, Dr. Nickell's Sanitarium, and the White Sulphur Springs are on the lines of the Chesapeake and Ohio railway, over which route mountain scenery and far-stretching valley landscapes of surpassing grandeur and beauty engage the eye of the traveller as he glides over the well-ballasted road in easy-riding parlor cars or in vestibule trains.

The South Carolina Medical Association

Will begin its annual session at Anderson, S. C., June 9, 1891, at which place and time the *Association of Confederate Surgeons* and the South Carolina State Board of Health will also be in session. Professor John Ashurst, of Philadelphia, Pa., will deliver an address before the South Carolina Association. As matters of importance to the profession will be brought up for discussion, it is sincerely hoped that a thoroughly representative attendance of the State's profession will be secured. Excursion rates will be allowed over all the railroads of the State. Dr. Thomas P. Bailey, of Georgetown, is President; Dr. W. Peyre Porcher, Charleston, is the efficient Secretary.

Higher Medical Education in the University of Pennsylvania.

On May 21st Dr. William Pepper offered \$50,000 towards an endowment fund of \$250,000, and \$1,000 annually towards a guarantee fund of \$20,000 annually, for five years, conditioned upon the establishment of an obligatory graded four-year course of medical study. The Medical Faculty pledged themselves to carry out this proposal, and to enter upon the four-year course in September, 1893, and subscribed \$10,000 annually for five years to the endowment fund. The approaching completion of the fine Laboratory of Hygiene, built by Henry C. Lea, Esq., will render the medical facilities of this school unequalled. This will be opened in February, 1892, under the distinguished teachers Dr. John S. Billings and Dr. A. C. Abbott, who leaves Johns Hopkins University to take the position of assistant director.

The Mother's Hand-Book.

We have received from the Publishers, The Everett Waddy Co., of Richmond, Va., advance sheets of this "practical treatise on the management of children in health and disease, with an appendix containing articles on diseases that may suddenly attack grown persons," by Levin J. Woollen, M. D., of Washington, D. C. It is specially intended as a guide-book for mothers and heads of families, to direct them what to do in cases of sickness when competent medical advice cannot be obtained, and in cases of accident when relief must be obtained quickly to avert speedy death. It, however, distinctly discourages the mother from assuming the functions of the physician when his services can be secured for any disease of a serious or complicated character. From an examination of some of the advance sheets, we are led to believe that this book will prove to be the one needed by many families—especially now, when so many are arranging to spend their summer months in the country where physicians cannot be always promptly secured. The Publishers are issuing this octavo work of 416 pages in Library sheep binding, with marbled edges, for \$2.75; in full cloth, \$2.25. It is just now about ready. In a later number, we will notice the work more fully.

The Medical Society of the State of West Virginia

Will hold its twenty-fourth annual session at Fairmont, W. Va., June 10, 11, and 12, 1891. Dr. L. L. Carr is Chairman of the Committee of Arrangements, Dr. J. H. Brownfield, of Fairmont, is President, and Dr. D. Mayer, of Charleston, is Secretary (Dr. Fullerton having died) as well as First Vice-President. The indications are that the coming meeting will be one of unusual interest, with a large number of papers, etc.

Editor-Elect of Journal of American Medical Association.

The trustees of the Association on May 13th elected Dr. J. C. Culbertson, for many years editor of the Cincinnati *Lancet and Clinic*, editor of the *Journal of the American Medical Association*, with authority to act as business manager also. Dr. Culbertson is an excellent selection, and under his management we expect to see many improvements for which his predecessors have conservatively prepared the way. He assumed charge on May 14th.

Mr. M. H. Peet's Advertisement

On page 65, after reading matter, was misprinted in May number. Those who want physicians' supplies at moderate prices should address Mr. M. H. Peet, No. 33 West Twenty-seventh street, New York, N. Y.

The Medical Department of the University of Texas,

Located in Galveston, will open during the autumn of 1891, with nine professors, and will give three years' graded course of instruction of eight months each. The pay of each professor will be, on an average, \$3,000 each session. The President of the Board of Regents is Dr. Thomas D. Wooton, of Austin. The College and Hospital will occupy adjacent blocks in Galveston, immediately upon the Gulf and Bay. It is the determination of the Regents to make this a truly leading school of medicine in every respect, and to allow none to graduate from it who are not deemed worthy of diplomas. We congratulate our Texas friends that they will so soon become leaders in medical educational reform.

The Health Restorative Company's Advertisement

Has had the typographical error in Dr. Warner's note, stating that he has used "Febricide" with excellent results in typhoid fever, reducing temperature from 104.5° to $89\frac{1}{2}^{\circ}$. We hope our readers have made the mental correction of 99.5° . "Febicide" seems to be too good an agent to produce subnormal temperature, when properly given.

The Practice for Sale, Etc.,

Advertised on advertising page 40, is by a gentleman who has a very lucrative practice. Few doctors in the country have as good. The price he has fixed is very moderate.

Obituary Record.

Dr. E. Carroll Morgan,

A distinguished laryngologist of Washington, D. C., died at his home May 5th, 1891. He was born in Washington 1856, and was a graduate in medicine from both the Georgetown University and the University of Pennsylvania. Afterwards, he went to Europe to perfect himself in his specialty, and in 1879 he established himself in Washington, where he achieved eminence.

Dr. W. H. Bolling,

One of the most prominent physicians in the South, and Dean of the Medical Department of the University of Louisville, died at his home in Louisville May 5th, 1891. He was 51 years of age.

VIRGINIA MEDICAL MONTHLY.

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WHOLE NUMBER, 208.

RICHMOND, JULY, 1891.

Original Communications.

ART. I.—Quick Passage and Removal of a Needle from the
Œsophagus—With Remarks.*

By RICHARD S. HILL, M. D., of Washington, D. C.

The case which I present to you is one of more than usual interest, and in one respect very rare.

On September 13th, 1890, Lewis Finney, colored, aged 6 years, of good size and health, was brought to my office to have a needle taken out which he had swallowed four hours before. Upon examination, I found on the right side, just above the fifth costal cartilage, a small protuberance, showing the needle pushing out the skin from behind, but had not yet punctured the skin. Pain was very acute, and upon touching the prominence with my finger, I could readily feel the head of the needle, and caused more acute pain, the child drawing his chest in and leaning over from the shoulders, so as to remove all pressure from the parts. Chloroform was administered, and Dr. Llewellyn Eliot removed in a minute a very rusty needle, with the point broken, the measurement being seven-eighths of an inch long. He recovered without complication.

* Read at a meeting of the Medical and Surgical Society, of the District of Columbia, December 15th, 1890.

This case is rare only as regards the passage of the needle, and interesting, as there were no serious or dangerous effects or symptoms.

The operation was, of course, very simple. The skin was taken up with a pair of forceps, and cut through to the needle; it was then held tightly over the cartilage, and the needle grasped with the forceps: it required considerable force to draw it out through the cartilage. In its passage the needle escaped all the blood vessels.

It is in wounding the blood vessels that the great danger in these cases lies, as we know, death is frequently caused by hæmorrhage or ulceration.

Agnew, in the second volume of his *Surgery* says, when speaking on this subject: "Foreign bodies frequently lodge in the œsophagus, varying in their nature, size, and shape, the most common being coins, bones, needles, artificial teeth on the plate, and solid masses of food. These bodies are very frequently arrested at the junction of the pharynx and œsophagus. The great danger in swallowing these bodies, is that as the body passes the trachea, it is very apt to cause suffocation."

Foreign bodies may, and do, very frequently, remain for years in the œsophagus, and are finally removed by a fit of coughing or vomiting. They may also by ulceration find their way into and against the adjoining organs.

Before going into the subject of treatment, I will mention a few very interesting cases, showing the danger of hæmorrhage.

Ivanoff, in the "Proceedings of the Kostroma Medical Society," October 11th, 1889, reports a case of death from penetration of the left common carotid artery.

Andrews, in the *London Lancet*, of 1860, mentions a case where a fish bone, by ulceration, passed through the gullet, entered the heart, and proved fatal by hæmorrhage.

Erichsen, in his *Surgery*, Vol. II, page 484, mentions a case where a piece of gutta-percha had ulcerated through the œsophagus, and by opening the œsophageal artery caused death.

Dr. Kirby, of Dublin, mentions a case where a bone penetrated the œsophagus, wounded and abnormally displaced the subclavian artery, causing death by hæmorrhage.

Dr. Solis Cohen records the instance of a man having swallowed, when a youth, two peculiarly shaped pins, which thirty years afterward, were found lodged under the skin of the shoulder.

In the *Medical Record*, December 13th, 1890, Dr. F. H. Wiggins records the case of a baby, nine months old, swallowing a gold pin, made like a safety pin, an inch and a half long; the pin was open when swallowed, and was passed, point upwards, without any pain, in fifty-four hours.

Pins, needles, and other substances often pass straight through the œsophagus to the stomach.

Treatment :—The mashed potato, the stale bread, and the thump on the back, are all good household remedies, useful and well worth remembering, especially when the substance is not solid, sharp and pointed. Then we have a variety of instruments, simple, and complicated, for introduction into the œsophagus, and removing the offending body. The introduction of these instruments may, and frequently does, cause pain, and sometimes, death.

The proper treatment in these severe cases is to quiet the patient with narcotics, and endeavor to reach and remove the foreign body, allowing, in the meantime, only liquid diet. Œsophagotomy has, in these cases, frequently to be performed, and when this is necessary, the case must be very serious. In my case, the needle was already finding its way out of the œsophagus, and endeavoring to pass through the thoracic walls; of course the operation was simple, since natural œsophagotomy had been performed.

1449 *Rhode Island Avenue.*

The Phosphates of Iron, Soda, Lime and Potash, dissolved in an excess of Phosphoric Acid, is a valuable combination to prescribe in Nervous Exhaustion, General Debility, etc. Robinson's Phosphoric Elixir is an elegant solution of these chemicals. (See page 28.)

ART. II.—Masturbation, with Illustrative Cases, and Remarks.

By ELLIOTT T. BRADY, M. D., of Marion, Va.,

ASSISTANT PHYSICIAN TO SOUTH-WESTERN [Va.] LUNATIC ASYLUM, ETC.

The following are a few of the many cases which have come under my observation. They are not selected for any special reason; but, taken thus at random, they serve very well to convey what I would like to impress, and they are presented more as a basis for the accompanying remarks than for any inherent interest which they may possess:

CASE I.—J. W., male, aged 21 years, single, a farmer; well-developed physically, except the head, which is slightly larger than normal; mentally, was always considered unusually bright and intelligent before the approach of insanity; two of his grandparents were insane; he also has one aunt insane; parents sound, physically and mentally: at 17 years of age he began to show eccentricity, became irritable, secluded himself as much as possible from the society of others, and became restless and inattentive to work or study; had ideas of self-importance, and formed the delusions that "bad women" were after him, trying to compel him to sexual intercourse; that his food was being tampered with; that his wishes were not complied with in a proper manner, etc. He soon became suspicious of every one's intentions; refused to talk; ate irregularly; and talked to himself a great deal.

He had tremors in nearly all muscles when attempting voluntary movement; dementia came on gradually, and, in 1887, was admitted to this Asylum.

His condition is now that of terminal dementia; his delusions are fixed, and similar to those previously mentioned; speaks little except of his delusions, and has masturbated freely ever since admission. In masturbating, he does not use friction of the genitalia, but evidently uses "concentration of thought," as he does not touch the genitalia at all, but raises one hand, usually the left, high above his head; then, with his gaze fixed upon one spot, he begins to snap his fingers as though he were calling a dog; he repeats this, the motion becoming more and more rapid until the climax, when he slaps the wall with his hand—and it is as he does this that he experiences the orgasm, and has the emission. He masturbates, when not restrained, from twenty to thirty

times daily. He is still in the Asylum, and gradually becoming more demented.

The habit, in this case, can be controlled, to a certain extent, temporarily, by the use of massive doses of the monobromate of camphor, or of the bromides, but their effect is soon lost. This man will, in all probability, die in the Asylum, his dementia increasing until death ends the scene.

CASE II.—B. F. M., male, aged 25 years, son of a prosperous farmer. Health fair previous to attack of insanity; head has the conformation usual in those who have inherited insane tendencies; has an aunt insane, and a brother who is below the ordinary standard of intelligence. No specific disease in himself or parents.

First evidences of insanity appeared about six years previous to admission. At that time he ran away from home without cause; and since then he has frequently wandered aimlessly around the country, but refused to speak and kept apart from others, became sullen and melancholy, and then began to masturbate. The habit grew upon him, and when admitted he was masturbating twelve to fifteen times daily. After admission, he had occasional outbreaks of violent excitement, but rapidly improved both mentally and physically until entirely restored. As he began to improve, he gradually dropped the habit, and had stopped it altogether by the time he was restored. He is now doing well at home, apparently sound mentally and physically.

CASE III.—L. V. H., female, aged 28 years; single; a domestic. First indications of insanity appeared about ten years ago, when there seemed to be a "general change of disposition," she becoming sullen and suspicious—vindictive and, at times, violently enraged. There is hereditary insanity in the family, and she has a sister insane; has had five attacks of insanity, each attack lasting about six months. In each, she is first sullen, then violent, then stubborn and suspicious. About a month after each attack begins, she starts to masturbate, and keeps it up until her mental condition begins to improve; but as she improves, stops the habit, and, when completely restored, she is free from the habit. The habit returns with each attack, and is always dropped as she regains her normal state. She uses her whole hand in masturbating, passing it into the vagina, and producing friction.

CASE IV.—S. F. G., female, aged 21 years; single; daughter of a farmer. First evidences of insanity appeared about six months previous to admission, when she became inat-

tentive to her duties, lost power of concentration, and, as her parents expressed it, "had no mind." Over-study, the supposed cause. Delusions, principally on the subject of religion; nervous, excitable, and maniacal; physical health good; did not begin to masturbate until after admission to the Asylum; masturbated by friction with hand in vagina. This was during an exacerbation of her mental ailment. She stopped the habit entirely as she began to improve mentally; has been discharged restored, and would blush to think of doing such a thing now.

CASE V.—L. F., female, aged 19 years; single; a farmer's daughter. First indications of insanity appeared about two years before admission, when she seemed inclined to keep to herself; was shy of strangers; refused to talk, and lost all habits of neatness. She soon became quarrelsome, destructive, and maniacal. On admission, she became more quiet for a time, but soon grew worse, and began to masturbate. In spite of treatment, she has continued the habit, and now uses every possible means to excite an orgasm. She will slide back and forth while sitting down, or will rub against the bed-post, uses her whole fist, or will roll her clothing into bundles as large as one's wrist, etc., using every conceivable means of producing an orgasm. So perverted has she become that pain in the neighborhood of the vagina seems to gratify her, and she frequently injures herself in various ways—recently biting a piece out of her thigh as large as a dollar and nearly half an inch deep.

REMARKS.—To masturbation has been accredited the production of an untold number of ills, both mental and physical. Beyond all question, the practice is highly pernicious, and, therefore, greatly to be deplored, especially if long continued and frequently repeated; but it is very probable that its importance as an influence has been greatly exaggerated—particularly in connection with the causation of insanity. No doubt it does sometimes lead to mental disorders. But the possibility of excessive or uncontrollable masturbation being sometimes due to the inherited or acquired tendencies of the patient, instead of being the cause of the insanity, should not be lost sight of. Such a theory is even more tenable than that of the inherited tendency to excessive drunkenness; for, while one may not inherit, or derive instinctively, the vice of self-abuse, any more than he may the

vice of drunkenness, he may and does inherit, frequently, the deficient moral resistance which leads to, and virtually consists in, the inability to cure any desire, or to refrain from any action from which one has learned that pleasure is to be derived.

The frequent practice of masturbation, however, may produce various nervous diseases, just as we find that excessive sexual indulgence, even in the married state, may do; and the greater frequency of the opportunities presented to the masturbator, in gratifying his desire, accounts, probably, for part of the special evils which arise in his case.

Excess in venery, which is often carried to extremes, and continued to an unreasonable extent, may give rise to palpitations, to pulsation in the epigastrium, debility, and nervousness in various forms; and the same is true of masturbation, which, carried to excess, gives rise to a similar train of symptoms.

The most serious forms of disorder attributable to this cause are *spinal paralysis*, *locomotor-ataxia*, and *convulsions*. Besides these, masturbation does, occasionally, induce an intractable form of insanity; but the insanity having such an origin is distinctive, and there is no excuse for ascribing to masturbation the causation of such cases as acute mania, or melancholia, acute delusional insanity, and the like.

The type of insanity which arises from masturbation, or from excessive venery, is almost certain to be dementia. The early symptoms arising from the habit are—an unnatural shyness, an evasive look, irresolution, a desire to be alone, loss of mental power, irritability of temper, and almost always we get a noticeable dilatation of the pupils. Soon, a general fear and suspicion of others arise, and then come hallucinations and delusions, such as, that they are acted upon in some way by electricity in the walls; that their food is poisoned; that they are acted upon by evil spirits, etc. Great religious fervor is frequent, especially in women.

There is, however, a great variety in the morbid nervous phenomena. Thus, I have noticed some cases in which

feelings of pride and self-importance were present—such cases having delusions of grandeur and an offensive forwardness of manner. In most cases, these patients gradually become weaker and weaker mentally, until dementia is apparent, this increasing rapidly until death ends the scene. General nervous symptoms are associated with the physical disturbance from the beginning—the most distinctive ones being palpitation at the epigastrium, “sinking” at the heart, and tremor of the voluntary muscles while in use. Should the habit be detected, and stopped, before the intellect is much impaired, mental health may be restored; but if once the insanity be fully established, recovery is the exception rather than the rule, as the vice is then seldom mastered.

Of the cases reported above, the first is the only one which has masturbation for its cause. In all of the others, the habit was formed after the insanity was apparent, and, in some, after their admission into the asylum. These cases, taken at random, fairly represent the general average.

This article is already longer than I had intended; so I will close with the *following deductions* from hundreds of cases, of which the above are fair examples:

1st. That dementia and general paresis are the only forms of insanity which can ever be attributed to masturbation.

2nd. That a very small percentage of dementias are so caused.

3rd. That in cases which are so caused, the result is due rather to the excess in venery than to the manner of its performance.

4th. That excessive masturbation is more frequent among insane females than males.

5th, and finally. That the habit, if carried to excess, is a symptom of diminishing moral resistance, and is apt to arise after any serious mental disturbance.

Dr. S. L. Barr, of Cavour, Dak., writes: “When a patient to me and asks me if I can cure his or her headache I unhesitatingly say yes, and do it with Peacock’s Bromides.”

ART. III.—How Should Cataract Operations be Performed.

By JULIAN J. CHISOLM, M. D., of Baltimore, Md.,

PROFESSOR OF EYE AND EAR DISEASES IN UNIVERSITY OF MARYLAND; SURGEON-IN-CHIEF TO THE PRESBYTERIAN EYE, EAR AND THROAT CHARITY HOSPITAL, BALTIMORE, MD.

That the technique of cataract operations is the most important element in success, no ophthalmic surgeon questions. Every improved step in the removal of an opaque lens has advanced the percentage of cures until failures are the very rare exceptions to a generally acknowledged fact; and cataract extractions, formerly so fatal to the eye, have become the most perfect of surgical procedures. As a young graduate, I found myself in Paris the pupil of the elder Desmarres, where cataract extractions were by no means common operations because of the difficulties, the dangers, and the frequent failures.

The common cataract operation of my early professional life was *couching*, a procedure that most of the ophthalmic surgeons of the present day have never seen performed. As you know, it was the displacement of the opaque lens from its capsular bed, in the vitreous chamber, so as to free the pupil and allow light to form pictures upon the retina. The immediate and momentary result of this operation was very brilliant. The staff-needle was the magician's wand. With it, the blind eye was apparently touched, and sight was instantly restored. In the twinkling of an eye, from seeing nothing, the patient could behold the face of the surgeon who had performed this miraculous cure and would be loud in his expressions of gratitude. The operation bore success upon its very face, and was declared such to the admiring class of professional attendants. This was in the early days of Napoleon the Third, and in France chin-beards were in favor. If the surgeon was ambidextrous, he would steady the head of the male patient firmly by holding the beard with one hand, while with the other he would plunge the needle into the temporal side of the eye, and make the point appear in the pupil from behind the iris. In a moment the

lens would be forced out of its position, through hyaloid tissues, into the lower part of the vitreous chamber, where it would be left resting against the retina and ciliary border. By changing hands in case of double cataract, the other eye would be, in like manner, impaled, and the lens displaced from before the pupil. This performance was truly the *coup d'etat* of the operating room. Two brilliant successful operations for cataract would be scored. The lids were then closed by strips of black court-plaster, and the patient sent to the ward, from which only a limited number reappeared with sight. In a large number of those operated upon, painful inflammation would, sooner or later, set in to the destruction of the vision which a momentary glimpse had promised to the patient.

At that time, when couching was of daily occurrence, I saw but very few extractions. The operation was deemed too serious for general application, and was rarely attempted by the most skillful. For it, patients were selected, and were carefully prepared by days of medication, and also by days of training, so that the eyes could be kept quiet while the manual was being perfected with the broad knife. The patient was put to bed before the operation was commenced, and every precaution was used to avoid motion of the body during the whole bed treatment. The eyes were kept carefully bandaged for days. With all of these precautions, failures were so frequent as to deter many blind persons from accepting the ordeal. If every other eye turned out well, the successful surgeon was satisfied with his work, and was congratulated by his colleagues.

What great changes have been brought about in my personal experience! From the satisfaction of not losing more than fifty per cent. of eyes under cataract extraction, some of us, at the present day, feel unhappy if we lose a single eye out of a hundred cases of simple senile cataract. All of this the improved technique of the operation has accomplished. The ideal cataract extraction seems nearly attained by the methods now adopted. Asepsis and antiseptics have brought this largely about.

To have absolutely clean instruments, as well as sharp ones, is a very important integral part of the work. There was a time in my early experience when every cataract patient had to be specially prepared by days of medication and dieting before they were made *fit*, or, as we now see it, before they were made *unfit*, to undergo the operation of extraction. The instruments used were considered in good order provided there were no rust-spots upon them. Our present knowledge, that invisible pathogenic germs introduced into wounds by bright instruments excite destructive inflammation; also that active purgation is not the universal panacea for re-establishing or maintaining health, has revolutionized the work of the ophthalmic surgeon. He now devotes more time to the purification of his instruments, his hands, and the eye to be operated upon, and less to the disturbance of the healthy natural condition of his patient.

At the present time, most of my cataract extractions are made on the day that the patients present themselves for treatment. In hospital practice, they are sent from the free dispensary to the operating-room, a warm bath, *in transit*, for general cleansing purposes, being the only preparation made.

My method of cleansing instruments is to plunge them into boiling water. I prefer this to soaking them in a carbolic or a boric acid solution. I find the boiling water the most speedy antiseptic or aseptic treatment, without detriment to the cutting quality of the instruments. After the instillation of a four per cent. solution of cocaine for five minutes, I wash the eye-ball with a stream of sublimate solution, 1:4000, and attribute more benefit to the thorough cleansing of the conjunctival surfaces by the water forcibly thrown from an irrigator than by the momentary action of the mercurial solution. I consider this more asepsis than antiseptis, and would place as much confidence in a stream of unmedicated water that had recently been sterilized by boiling.

A properly-made wire speculum seems to me the ideal

method of keeping the lids apart. The instrument should lie flat to the temple, and should make no pressure upon the eye-ball. All eye speculæ by no means carry out these indications. Some use the speculum only to complete the corneal section. I prefer keeping it in place from the beginning to the end of the operation.

I also use the fixation forceps until the lens is extracted. I feel that the eye is safer by so doing. Some use the forceps only to aid in the corneal section, and trust to their control of the patient during the remaining and important steps of liberating the lens. This always seems to me a needless risk. With many patients, the eye will involuntarily roll up suddenly at a most inopportune moment, when instruments are within the eye-chamber. Unless extreme vigilance and great dexterity are used to anticipate these eye movements, serious injury to the eye will occur. As against this confidence in the patient's ability to keep the eye quiet, I find the judicious use of the fixation forceps a better guarantee against accident.

By nearly universal consent, the corneal wound is made upwards, and is restricted to the clear cornea, although the puncture and counter-puncture are placed in the lumbus, where the white sclerotic overlaps the clear cornea. This is done to give width to the opening. The long, narrow, sharp pointed, and keen-cutting knife of Græffe is in universal use. To do all that is expected of it requires the constant care of a good cutler. In making the section, most surgeons follow the corneal curvature in a line just within the clear corneal boundary. The varied size of the opening through which the lens is to escape without squeezing the angles of the corneal wound is secured by approaching more or less to the horizontal meridian in the transfixion. This needs experience and judgment to determine in advance in each case the size of the lens to be extruded. In making the corneal section, some cut with the point of the knife, and then with the heel—a sawing motion. Others complete the entire section by making the point follow the corneal curvature as the blade is pushed forward. These are peculiarities

of the operator, and are non-essential, provided the knife is dextrously handled, and pressure is not made upon the iris by the blade of the knife in the to and fro movements of sawing.

When an *iridectomy* is to be made, it is now generally agreed that the coloboma should be small. By seizing the iris near the pupillary border with the iris forceps, it is drawn vertically upwards. As soon as the pigmented pupillary edge is seen out of the corneal wound, this protruding portion of the iris is cut off by one snip of the scissors. This gives a comparatively small opening which will not be conspicuous, nor will it permit too much irregular refraction.

The *method of opening the capsule* is still a mooted point. To tear off and take away the anterior surface of the capsule, is undoubtedly the ideal method, as it does away with secondary operations. With an iridectomy, and a properly constructed forceps, this can readily be effected. When the iris is left intact, it requires nice manipulation to avoid including the iris in the blade of the forceps, when the anterior face of the capsule is being removed. In opening the capsule with the cystotome, much is said of the cutting properties of this diminutive blade which seldom acts as a knife, but tears the capsule with its sharp point. Provided the lens is large enough to let the lens out freely, it seems to matter little whether it be in triangular or in T shape. Either of these seem preferable to the exclusive horizontal cut over the upper edge of the lens, which leaves the anterior capsule entire, to be disposed of by a secondary capsulotomy some weeks after the extraction.

The *delivery of the lens* is made either by curette pressure on the cornea, or by finger pressure through the lids, the speculum being previously withdrawn. When the patient can be relied upon to direct his eye as the operator desires, no great difficulty presents for finger manipulation. I, with the majority of surgeons, prefer to retain the speculum until the pupil is cleared of all lens substance. I find that when the corneal wound has been made to correspond with

the size of the lens to be extracted, the pressure of a shell-spoon below the ciliary border tilts the upper edge of the lens forward, as well as starts its movement upwards, and delivery is accomplished by following with the spoon the lens as it advances. In the majority of cases, by spoon manipulation on the cornea, all lens substance can be removed, even when the iris is left intact. When the lens seems to stick to the inner face of the iris, I have found much benefit in making pressure, with the fixation forceps above the corneal wound. Beside keeping the eye quiet, it helps to direct the upper edge of the lens through the corneal opening. To get out fragments of lens which are disposed to remain, notwithstanding spoon pressure, I have sometimes used the curette, as is constantly done by Galezowski; or I have washed out the chamber by means of a syringe, as is the constant practice of De Wecker. I do not find it necessary to use either of these methods habitually, as do those surgeons.

I have found at times the forceps of great value in recovering fragments of thickened capsule. Recently, in one instance of capsule, so thick that the effort of dividing it ruptured the suspensory ligament, I seized the capsule with forceps, and delivered the lens entire in capsule by traction. It was without iridectomy, and gave perfect final results. In another case, equally without iridectomy, with thick capsule, which did not yield promptly to the cystotome, I drew out the entire capsule by forceps, and then by pressure removed the lens. There is no doubt that a very important part of the ideal operation of cataract extraction, is to leave the pupil clean of all lens detritus. This should be effected by patient, delicate manipulation, using curette, syringe, or forceps, as the indication may demand.

When iridectomy has been performed, it is important to have the angle of the corneal wound freed from the presence of any fold of iris, and the spud should be used to dislodge any portion of this membrane which may have been caught in the lips of the wound. When no iridectomy is done, in the majority of cases after pupil-cleansing, the iris resumes

its normal position, with round, central pupil. Should the pupil be irregular, or the iris tend to prolapse, it should be replaced *in situ* by smoothing it out with the side of the spud, using gentle lateral pressure on the face of the iris in the anterior chamber to release any pinching of the iris by the angle of the corneal wound. If the iris be injured during the lens exit, or a tendency to prolapse shows itself, it would be better at once to convert the operation into one, with iridectomy, rather than run the risk of an iritic hernia after the final dressing is made. The cleansing of the corneal wound of any blood clot, and the removal of all lens detritus from the conjunctiva, completes the operation. If no iridectomy has been practiced, a drop of an eserine solution, one half per cent. strength, is placed upon the cornea; otherwise the eye is ready for the permanent dressing. With the closing of the lids after a careful examination, at least nine tenths of the dangers against a successful result, have been successfully met.

In my professional experience, it matters little how the eye is dressed, provided the upper lid be kept for a few days over the corneal wound for its uniform support whilst healing, and provided no irregular pressure be made upon the cut eye-ball by badly adjusted compresses, or by too tightly tied bandages. Experience has led me to adopt the lightest of dressing, and the avoidance of dark rooms. I feel also quite assured that we have all erred in inflicting too much bodily restraint to the annoyance of our patients. To be sure, we get finally good eyes after carefully performed operations when we keep patients on their beds in dark rooms; but we get equally good results in like proportion after carefully performed operations, when we do not treat them as bed patients. It is more the careful technique, and not so much the after-treatment that increases the percentage of cures. I am glad to say, that I see a general relaxation from the rigid rules for dark rooms and bed confinement in such universal use in years back. I am sure that this rational change is for the good of both surgeon and patient.

The ideal extraction of simple senile cataract is undoubt-

edly without iridectomy, making a flap opening in the upper segment of the clear cornea, destroying, or better, removing the anterior face of the capsule, and getting rid of all lens detritus from the pupil.

The operation of *extraction without iridectomy*, is evidently growing in favor. With myself, it is decidedly so, as shown by my Annual Hospital Reports. The report of the work done at the Presbyterian Eye, Ear, and Throat Hospital, of Baltimore city for 1887, gives eighty-three cataract extractions, all with iridectomy. For 1888, ninety-seven extractions of senile cataract, of which forty were done with iridectomy and fifty-seven without. For the year 1889, of ninety-three extractions, thirty-three were with iridectomy and sixty were without. For last year, 1890, of 113 extractions, ninety-three were without iridectomy, and only twenty with iridectomy. Unless specially contradicted, all simple senile cataracts are extracted by me without iridectomy. When accidents occur to the iris during the corneal section, or during the escape of the lens, it may be proper to excise a portion. In some cases when the iris is replaced after the lens has been extracted, it shows a tendency to prolapse, notwithstanding the instillation of eserine. Should such be noted, it is better to remove the protruding portion of iris now, and in this way avoid the accidents of iritic hernia during the after treatment.

114 W. Franklin St.

ART. IV.—Animal Diseases and the Public Health—Abattoirs and Meat Inspections.

By W. H. HARBAUGH, V. S., of Richmond, Va.

In the October (1890) number of the *Virginia Medical Monthly*, the writer, in a short article, referred briefly to the importance of having veterinarians connected with boards of health. The opinions therein expressed have met with the approbation of prominent physicians, who, in conversation with the writer, urged that the question being of vital interest, all possible light should be thrown on the matter.

To fully treat the subject selected for consideration in this article, would require more space than is at command; hence, but a few facts culled from experience, and various other sources, will be brought forward to serve as food for thought.

Since the facts and figures collected by the census enumerators have been made public, much has been written on the health and rate of mortality of different cities; and numerous (and often amusing), have been the explanations of the high rates of mortality in certain localities, as well as the plans advised to reduce the percentage of deaths in the records of mortality. With commendable enterprise, the daily press of our own city has, for months past, agitated the question, and many good points have been advised—among them the establishment of an *abattoir*. A correspondent of the *Dispatch* gave much excellent advice in very few words; in addition to other things, he said:

“Have no hog-pens within two miles of the city limits. What villagers we are, to be sure, to allow hogs in the city! Have an *abattoir*, and close all the butchers’ pens within two miles of the city. The dirt and stench from these pens around Richmond, are a disgrace to the civilization of the times.”

There is no doubt in the mind of the writer, that if the advice of this correspondent be acted upon by the authorities, the percentage of mortality would be decreased, and the reports of the health department of our city would make a better showing.

The establishment of an *abattoir*, and closing up hog-pens and slaughter-houses, would get rid of much stench. That is certain; but, if in addition to the *abattoir*, an educated veterinary meat inspector—an officer appointed by the city to properly examine animals before they are killed, and inspect the meat afterwards—then the existence of the *abattoir* would have a marked and favorable effect on the rate of mortality.

To more forcibly illustrate this point, the following quotation from the *Veterinary Journal* is *apropos*:

"It is an indubitable fact that cattle, sheep, and pigs, are often attacked by maladies which are either very fatal, or the treatment of which is troublesome or expensive. What becomes of the great majority of these creatures, we can only hazard a guess; our inquiries at knackeries and kennels lead us to believe that they are seldom sent there, and report has it that they are very seldom buried. We know that for certain diseases the veterinary surgeon is rarely called in, but instead of him the butchers' services are invoked. It would, therefore, appear, that very many, if not nearly all the hopelessly sick animals of the species mentioned, furnish pabulum for mankind in some form or another."

If the law made it compulsory for all animals to be examined, and then slaughtered at the *abattoir*, such meats could not be exposed for sale. As a matter of course, it is not to be presumed that we have any butchers in our vicinity who would knowingly be guilty of selling such meats; but that it may be done, as the law stands, there is no doubt.

Now, it must be remembered, that the butcher is by no means a pathologist, and consequently, animals affected with diseases that are communicable to man, are in fact slaughtered, and their meat publicly sold, without any restrictions whatever.

Tuberculosis is a very common disease among animals used for human food. They are subject to various forms of it. If the reader desires to inform himself on this point, he is advised to read "*Ætiology of Tuberculosis*," by R. Koch.

At the University of Pennsylvania, the Veterinary Department has organized a commission to test the value of Koch's lymph on animals. Prof. W. L. Zuill, the chairman of the commission, in a paper published in the *American Veterinary Review*, explaining the object of the commission, says:

"The opinions of veterinarians, whose experience gives weight to their statements, indicate that from 5 per cent. to 25 per cent. of the dairy stock of the country is affected with tuberculosis. This is a most serious state of affairs, as tuberculosis is admitted to be a highly contagious disease, and

is more easily transmitted to man than to other animals, from the fact that they consume the milk and flesh of these animals in a more or less uncooked condition. It is, therefore, a well recognized fact that tuberculosis in man is, to a very great extent, derived from diseased cattle."

Up to a very recent period it has been considered by many that it is only necessary to excise the tubercles from the affected animal to render the meat safe; but now, it is the opinion of many, that when an animal is affected with any form of tuberculosis, the whole animal should be rejected as food, and in fact, in a case at law in Scotland lately, it was so decided by the court.

In the discussion of such questions, it is often asserted that thorough cooking, by destroying the germs of the disease, renders the meat safe; and it is as often pointed out that, whereas, cooking may destroy the germs, it does not destroy the ptomaines—the poisonous chemical products of the germs.

Scan the weekly death reports and observe the number of deaths caused by consumption and other forms of tuberculosis, and then answer the question: Would the establishment of an *abattoir*, and the institution of veterinary meat inspection have a favorable effect on the public health, and decrease the rate of mortality?

Have you ever observed cattle with enormous enlargements of the jaw bones? It is not an uncommon sight to be seen at cattle-yards. Such cattle are affected with actinomycosis, a diseased condition due to the ray fungus—the actinomyces. Cattle, sheep, pigs, are subject to it, and it is communicable from them to man by inoculation. This affection does not confine itself to the bones of the jaw; it commonly attacks the tongue, and other parts of the digestive canal, as well as other parts of the body, skin, and lungs. Those who are so fond of boiled tongue, should be certain that it is *well* boiled, for in the absence of meat inspection there must be many a tongue that finds its way to market more or less affected with the actinomyces. It is true that badly affected ones are rejected, and the diseased

parts cut from those not badly affected ; and it is also true that in order to affect, the fungus must find its way into an abrasion ; but still who cares to run the risk if it can be avoided ? Such food is not even fit for dogs, as the disease has been seen in them.

Man gets his tape-worm from eating animal food not thoroughly cooked ; the *tænia mediocancellata* from measly beef ; the *tænia solium* from measly pork ; and the *tænia tenella*, from mealy mutton.

Trichiniasis of man, from devouring the *trichina spiralis* in pork, is too well known to require more than mention.

Anthrax is another disease of animals which has been conveyed to man by inoculation. Cases are on record where persons ate the affected meat, which by coming in contact with a denuded surface in the alimentary tract, produced the disease.

Septicæmia and pyæmia are not rare affections among animals ; but, nevertheless, we have no guarantee that animals affected with these maladies are not slaughtered and sold to us for human food. Consider, for a moment, the great prevalence of hog cholera and swine plague, and then ask yourself if it is not possible for animals with these affections to be slaughtered and sold for food ? Again : Is it not strange that the many people who believe in the authenticity of every mad-dog scare do not demand some law to prevent animals that have been bitten by dogs supposed to be mad being slaughtered and sold for food ?

The bodies of animals affected with certain diseases are not even safe to be used in the manufacture of fertilizers, soap, glue, etc.; but still we have no law to prevent the possibility of their being used for human food.

It is useless to refer to the numerous diseases which unfit an animal for human food ; but that they exist, no medical man can deny. The question is not a recent one ; it is almost as old as the world. The ancient Jews laid down laws regulating what meats man should eat, and what he should not eat. In the days of Moses, it is not to be supposed that they understood the nature of disease in respect to

their scientific classification ; but that they understood the importance of circumspection in respect to certain articles of diet cannot be denied, as evidenced by the fourteenth chapter Deuteronomy. One verse alone covers much ground, viz., 21st: "Ye shall not eat of anything that dieth of itself; thou shalt give it unto the stranger that is in the gates, that he may eat it; or thou mayst sell it unto an alien:" etc.

According to the unwritten laws of Virginia hospitality, such intentional treatment of a stranger within our gates, would not make entertainment enviable, but in the absence of any enforcement of laws on this head, it is not a certainty that the stranger and resident, too, do not get a meal of such meat occasionally.

The great majority of people think that an honest butcher is a sufficient safeguard, but the idea is absurd. Let me ask you this: As a physician, are you competent to conscientiously fill the office of a scientific meat inspector?

There is a large class of affections (many of them parasitic, and requiring the aid of the microscope to detect) which the special pathologist alone is able to pass upon; and hence it is readily understood that none but the specially educated veterinarian is qualified to properly inspect animals and meat.

In a paper read before the U. S. Veterinary Medical Association (published in the *Journal of Comparative Medicine and Surgery*), Oloff Schwartzkopff says:

"The question for us to consider now is, where can meat inspection be carried out? Whoever has had the chance of visiting a slaughter-house, such as are found scattered all over the land, in city or country, must have felt disgusted at the prevalent condition of such places.

"Not to speak of the total absence of any hygienic arrangements, the unclean manner in which they are kept, makes them a horror. Gentlemen, I feel sure that no meat inspection is possible nor advisable in such place. We cannot be expected to perform our duty in blood and dirt up to our ankles. If civilization should be extended anywhere, it is to the slaughter-house. But looking at

this matter as leniently as possible, it remains a duty to condemn these places, and to demand the erection of public abattoirs by the community. No expense is too large, no sacrifice too heavy, to accomplish this end. The plan, location and erection of such public abattoirs should not be decided upon without the advice of a sanitarian, and an architect who can properly apply the principles of hygiene to such buildings.

“As to the question, ‘Who should be recognized as the proper expert in meat inspection?’ there can be but one answer, namely, the veterinarian. To successfully perform both ante-mortem and post-mortem inspection requires a thorough knowledge of physiology and pathology of our domestic animals and their relation to the human race. As the physician is too much of a specialist to be compelled to pursue these studies, the other medical profession should consider them. This is specially proper, since every educated veterinarian diligently follows the discoveries of medical science, whereas the physician is largely ignorant of what is going on in veterinary science.”

Now, as to the laws on the subject: Practically, we have none. It should be both possible and easy to frame efficient State and city laws to meet all requirements without interfering with inter-State commerce.

Does not it seem ridiculous that our Government recognizes the necessity of meat inspection, and actually passes laws which require that all cattle and sheep be inspected before leaving our ports, while it fails to legislate on the same subject for us? Or, in other words, our own Government insures safe, wholesome food, free from disease, to foreigners, while we ourselves are allowed to swallow all sorts of food without any guarantee whatever.

At another time the writer will refer to the system and statistics of the veterinary meat inspectors at *abattoirs*.

It is well to remark that the veterinarian filling this position should be a member of the board of health, as this part of his duties is directly concerned with the public health.

ART. V.—Cleanliness in Obstetric Practice.*

By J. WESLEY BOVEE, M. D., of Washington, D. C.,

OBSTETRICIAN TO COLUMBIA HOSPITAL.

I have thought I could not select a more suitable subject for your consideration than *cleanliness in obstetrical work*. The fact that beginners in medicine rely to no small extent on maternity cases for their support is evidence of the importance of a thorough familiarity with what pertains to the lying-in period. In a short paper—one to be read in a few minutes to a number of fatigued auditors—this subject can not be fully considered; but I will attempt to point out a few of what may be called the necessities of properly practiced midwifery.

Cleanliness is really a broad term when applied to medicine and surgery. We attempt to free the patient in the lying-in ward of all filth, whether it be organic or mineral, living or dead. We may employ friction, washing, chemical agents, etc., or combinations of any or all of these. The time was when the woman in labor was called the nastiest thing met with in medicine; and washing the hands, even before making the vaginal examination, was considered poor practice, and the physician so doing was considered very æsthetic and dainty. The result was that many a filthy finger was introduced into the vaginæ of parturient women, and many a case of "child-bed fever" followed such manipulations.

This practice among private patients was highly fatal; and what must it have been in maternity hospitals? At the time I refer to, the mortuary reports of women and newly-born infants in these institutions, during the puerperium, were really appalling. The mortality in the best European Maternities at that time varied from 15 to 20 per cent. Friesch (*Grudzuge der Pathologie und Ther. d. Wochenbetts*, 1884, p. 34), speaking of this subject, says, "To be laid

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, March 16, 1891.

on the bed of confinement was equal to being delivered to the hangman." Ramsbotham said it was less dangerous for women to be delivered in hovels, and declined to serve in a lying-in charity in London. Many a woman has lost her life through careless handling by nurse or physician. Witness the ravages of puerperal septicæmia in the practices of different physicians in years past, simply from carelessness and unsafe methods at that time in vogue.

Now such occurrences are unheard of. Such cases seldom occur unless it be through ignorance on the part of a few of the great improvements in the obstetric art, or through the obstinate persistence in continuing old and fatal methods. What wonderful strides have occurred during the past half century, and especially in the past decade, from instilling cleanliness into obstetric practice. The change is marvellous. These same institutions that had a mortality of 15 to 26 per cent. have reduced the fatal cases to almost nothing—less than one-half per cent. In the Prague Maternity according to Paul Bar, previous to 1875, the mortality averaged about 10 per cent. among the parturients, and this was considered excellent. But that year new wards and anti-septic methods were used, and the mortality rate came down to 2.75 per cent., and in 1882 it was only .55 per cent. Lusk says that in 1883, in over 1,100 confinements in Professor Streng's Division of that Hospital, not a patient died from septic causes. Taylor (Cincin. *Lancet-Clin.*, Feb. 21, 1891,) reports 300 cases delivered in the Cincinnati Hospital with but one death, and that death was from puerperal eclampsia—a mortality rate of but .33 per cent.

Price likens the causes of septicæmia to an epidemic of typhoid fever in one of our great Eastern Colleges. He says: "The students were prostrated in such numbers that the institution was closed. Those that were not sick or dead went home, while those who were brave enough to stay were daily treated to addresses, and listened to prayers upon the inscrutable Providence of God. But after a while a sanitary investigation was made, and a reeking sewer-pipe, emptying its filth, and poisoning all within its reach, was found

and repaired. The premises were disinfected, and the visitation of Providence ceased." He adds: "We now know that in a majority of cases, especially in maternities and illy-drained and plumbed houses, it is due either to dirt or a poisonous miasm, deadly in the extreme or so attenuated as to produce annoying if not dangerous symptoms."

All this progress and improvement may be traced to the work of one man in 1847. Ignaz Philip Semmelweiss, an interne in the great Maternity Hospital in Vienna, worked out the theory satisfactorily to himself and a few others, that "puerperal fever" was due to absorption of septic matter, and that it could be prevented in part by destroying this morbid agent by disinfection. Though Pasteur demonstrated the existence of living germs in this malady, and Lister organized an advance upon these germs by chemical agents, yet they were but improving the path made by Semmelweiss. Schroeder said, "Semmelweiss was the greatest benefactor of humanity."

It must not be thought this path was easily travelled. The opposition and obstructions were many times almost insurmountable; but results were a convincing argument in its favor. To-day we are not so much contending with germs—fighting organisms already developed—but are striving to prevent their development. We are not using germ-killers, but germ-preventers:—In other words, *practicing cleanliness*. Some aim to do this with clean water without chemical agents, of course paying great attention to the details of the work, that no filth is present. This is more successful with general surgery, I fancy, than with obstetrics. Those who do not use chemical agents are adepts at cleanliness. In maternity hospitals, antiseptics will be necessary, as infectious conditions will come in frequently, and there is always a liability of septic germs lurking about a lying-in hospital, ready to implant themselves upon the raw exposed surface of a maternity case. Therefore, the plan to be pursued in such institutions is to cleanse every patient of filth of all kinds, and be sure to keep them free from it.

Before relating the details of such treatment, it is best to present some ideas of a *proper maternity*. The building, whether of brick or wood—preferably brick—should set out well from other buildings, that the circulation of air about it may be free, and the supply fresh. The surroundings of the building should be devoid of foul odors and the decomposition of vegetable or animal substances. The grounds surrounding it should be a well-graded lawn. The basement should be dry and well-aired. The wards should be small, having not more than six beds, and these should be empty, a whole ward at a time, at least every fourth or fifth week. At Columbia Hospital, the lying-in department is a one-story frame cottage situated on a terrace about ten feet in height, though poorly planned for lying-in purposes, poorly ventilated, poorly heated, and poorly plumbed. One ward contains eight beds, and this we wish to utilize for six beds instead. The culinary department should be, and is, at Columbia Hospital, entirely outside the building. All plumbing should be outside the building, unless it be a small range for heating water for use in the building, and even this had best be in an isolated part of it. The heating of the wards should be by open fires or by hot water or by steam-pipes, round and smooth, and placed from the walls sufficiently far to admit thorough cleanliness about them. The steam-radiators ordinarily in use are wonderful receptacles for filth, and the radiating heat carries it about the room. Their capacity as incubators for septic germs is almost unlimited. The ventilation should be as nearly perfect as possible, and the supply of fresh air should be plentiful. The walls of the ward should be hard, smooth, and washable, and all corners rounded. There should be in them no wash-board next to the floor; no window- or door-castings, and no cracks in the floor. There should be absolutely no place that would admit a deposit of filth.

No visitors should be allowed in the lying-in wards. These wards, when emptied, should be thoroughly fumigated and cleaned. For every 1,000 cubic feet of room space, three pounds of sulphur should be used. The patients

should be all delivered—not in the wards, but in one or two special rooms for that, and no other purpose. They should be separate from the remainder of the building for two reasons principally—viz: to ensure clean delivery and to prevent the cries of the parturient being heard by other inmates of the Maternity. Here the women are prepared for the lying-in period, and are transported by carriage to their beds. Here should the most extreme care be exercised that septicæmia may not begin.

These rooms should also be devoid of all mouldings and interior decorations; the floors perfectly impermeable, and the walls continued, plastered down to the floor. They should be finished in soapstone, so that they might be washed with a hose-pipe, even, if necessary. They should be about 12 feet square, and of about the same height, well-ventilated, well-heated either by open fire or by smooth, round steam-pipes, so situated as not to interfere with cleaning the room. All corners must be rounded. The iron bedstead should be painted, as Prof. Goodell suggests, and enameled white, so that mercurial solutions will not corrode them, and also that any dirt on them may be noticed.

The delivery-rooms now building at Columbia Hospital are connected by a corridor, 30 feet long with the lying-in building, and will be constructed as above mentioned. The mattress is to be straw and changed after every delivery. A shelf is to be upon the wall for irrigation jars. A chair and a small stand will, with the bedding, complete the furnishing of these rooms; nothing should go into them that does not belong there. All soiled linen from these, as well as from the other rooms, is to be immediately removed from the building and soaked in an antiseptic solution.

The medical internes should be thoroughly trained in the management of normal easy cases, and in all others, to promptly call their chief. They must, as well as the nurses, be faithful in their work; be constantly vigilant for dirt, and place their faith for good results in cleanliness. With this training, they will keep the wards scrupulously clean, and carefully guard against sources of infection.

A filthy doctor or nurse is worse than a filthy patient or a filthy lying-in room. Mundé says: "A physician whose finger-nails are habitually in mourning should give up the practice of obstetrics." The internes must bathe frequently and their fingers must always be scrubbed with soft soap and a nail-brush before a patient, during labor, or the puerperium, is to be examined. The hands and fore-arms should receive as careful attention. Nurses should be exceedingly careful while bathing lying-in women. Much care is needed in keeping the fingers about the nails clean. They should be moderately short and trimmed smooth; no hang-nails or other place for collection of dirt allowed. The brushes must be good and used freely, after which the hands are submerged in mercurial solution and the vaginal examination made.

A word of warning just here concerning nail-brushes may not be out of place. These brushes, from their very construction, are liable to be collectors of filth, and especially are they liable to this, as they are used to remove filth from the hands, arms, etc. They must be frequently washed, and, after each scrubbing, should be immersed in a mercurial solution. Soft soap requires considerable washing for its removal, and is therefore a voucher for much hand-washing. Hirst uses it in the maternity wards of the University of Pennsylvania Hospital, and lauds it highly for that particular reason.

The time of admission of patients should depend largely upon the capacity of the hospital compared to the number of applicants, with a view to prevent crowding. It is believed, however, that ordinarily normal cases should not be admitted more than 3 to 10 days previous to delivery. There are a few valid reasons for not admitting such cases earlier. These are evil associations, liability to infection, and additional expense, as well as unnecessary occupation of hospital space. Of course some cases will not apply for admission until labor has begun. Consequently, patients arrive in all the stages of labor, and sometimes the child is born while the mother is trying to reach the hospital. I have

sometimes been obliged to support an infant between its mother's thighs that was born on the hospital elevator going up to the maternity wards, and frequently have I delivered, in the vestibule of the hospital, women that had failed to reach the institution before labor was nearly ended.

What wonder is it that prompt measures must be observed to prevent septic ravages in maternities filled with patients from all the walks of life, and that have, in part, suffered from normal degradation and its baneful effects! Gonorrhœa is frequently present in parturients of the lowest classes; and in them what an opportunity for extension it has unless attacked by appropriate measures! Directly after admission, patients should be bathed in a bath-tub with soap, brush, antiseptic solution, etc., and under the supervision of a nurse, who shall inspect them for skin eruptions, ulcers, varicosities, pediculi, and evidence of specific disease. She should promptly report upon the same. On every second day until confinement these patients should be bathed very carefully.

The bowels should be kept open every day. Usually, these patients require a cathartic, and I think the salines are best. I usually give a saturated solution of Epsom salts, before breakfast, Seidlitz powders, and, when preferred, castor oil.

When the patient is in labor, she is taken to the delivery-room, which is always kept in readiness. To this room none others than patient, nurse and physician are admitted. Before this change is made, she should be given a full, thorough bath, and her bowels and bladder emptied. Her clothing must be changed for a gown only, which she will wear while in labor. If the patient has arrived at the hospital already in labor, it may not be possible to carry out all the details mentioned; but the bathing and changing of clothing must be done, if time will permit, before the patient is taken to the delivery-room. The body, external genitals, hips and thighs should be carefully scrubbed with a 1 to 2,000 solution of corrosive sublimate, or a 5,000 solu-

tion of mercuric iodide, before the second stage of labor begins.

If there be a suspicious vaginal discharge, or evidence of severe vaginal or uterine disease, a hot vaginal douche is advisable. For this I prefer a 1 to 10,000 solution of mercuric iodide, at a temperature of 100° to 105° Fahr. The patient should be examined when labor begins, and not frequently afterwards, unless it be really necessary. Before every examination, the interne should be certain his hands and arms are perfectly clean, and should wear a clean gown in the delivery-room over his clothing. It should be made of some smooth, white, hard and washable material, so that it may be washed after each delivery. It protects the patient against danger from the physician's clothing, should they happen to be soiled. It should be worn no place else.

It may be necessary to use lubricants, especially after vaginal douches; and for this purpose I use carbolized vaseline or other vegetable oil.

Immediately after the child is born, an antiseptic pad should be applied over the vulva, and *kept there until the patient is washed and dressed*, when it is changed.

The umbilical cord is cut only after pulsation has ceased, unless some complication requires a hasty separation.

The placenta must be allowed fully twenty minutes for its expulsion. If, at the end of that time, it remains inside the uterus, it may be carefully and slowly expressed by the method of Credé. No traction on the cord should ordinarily be made, as it may cause the vulvar orifice to open more than necessary, and thus allow the entrance of air. The placenta is expelled against the pad which, during this time, has not been removed.

It will be noticed that the *vis a tergo* force has caused the vulvar cleft to dilate only so much as was positively necessary to permit the passage of the uterine contents, and no air has invaded the parturient track, nor have the fingers, or any foreign substance, been introduced from without. In this way no septic material has been conveyed to the woman. All septic agents now present in the parturient

track are probably not due to obstetric manipulation. We may, however, be obliged to introduce a finger or two, possibly a hand, to remove portions of the foetal appendages, and this is dangerous. After such manipulations, a douche, either vaginal or intra-uterine, according to parts invaded, must be employed. If there has been a dead or macerated foetus, or a suspicious discharge, these douches, two or three times daily, should not be omitted from the after-treatment. If there has been a laceration of the perineum to any extent, it should be stitched up by chromicised cat-gut, or by silk, and great care must be exercised in this operation that sepsis does not follow it.

As soon as the cord has been tied and cut, the child's eyes, if living, should be carefully washed with a borax or boracic acid solution, and carefully dried with absorbent cotton; after which one drop of a one or two per cent. solution of nitrate of silver should be dropped in each eye (on the conjunctiva). The surplus can be washed away with the borax solution.

In the Washington Asylum Hospital, I have been using the two per cent. solution, as ophthalmia developed in two cases shortly after birth, the one per cent. solution of silver having been used. The mothers of these two children undoubtedly had gonorrhœa at the time of delivery. This method of preventing ophthalmia neonatorum originated with Credé, of Vienna, and is of inestimable value. Any one who has seen destruction of the eye from this dread disease as I have, will appreciate any method of its prevention.

The mother and child, after being washed and dressed, are transported to a ward or separate room. The stump of the cord should be dusted with iodoform and boracic acid, or other antiseptic powder.

The delivery-room is prepared for another case by all linen, etc., being removed, floor and bed washed, and a new mattress and other appurtenances being supplied. If the last case has been a suspicious one, the washing in the room must be thorough. Doctors and nurses should not go from

a septic case directly to a normal one. They should first bathe with soap and antiseptic solution, and change their clothing throughout. Their garments should always be scrupulously clean. The child should not be placed in the bed with its mother, but be kept in its own bed instead. In the bed assigned to the patient she will remain until she is able to be about the room. The vulvar pads, which consist of oakum, or of jute covered with mercurialized gauze, should be changed every three to four hours, according to the amount of lochial discharge, and as long as it continues. Douches will not be needed unless evidence of sepsis is present.

The foregoing is, in the main, the practice in the Columbia Hospital for Women and Lying-in Asylum, and as soon as practicable I hope to have it in entirety followed. It will be seen that many and minute are the details of hospital obstetrics. They are still greater in number and minuter than herewith given, but each one has for its employment good reasons, and habit makes their practice easy and comfortable.

In private practice, previous to aseptic midwifery, the obstetric mortality rate was never so high as in maternities, and the change has not been so marked. In fact, it is three or four times as high as in maternities, being one to two per cent., which is owing to the continuance of bad practice. This speaks loudly for cleanliness in obstetrical work, for it cannot be conducted in private practice as in hospitals. Many of the minutiae of hospital obstetrics are not needed in private practice; but clean hands, and clean instruments, and clean bedding, are necessary and practicable. There is no need of allowing the use of a filthy pad under the patient while in labor, nor of filthy cloths as occlusion pads for the vulvar. We *must* have clean bedding, an abundance of fresh air, and the room cleared of superfluous furniture and clothing, carpets, etc. The audience, during labor, should be as small as convenient; the soiled clothing should be removed from the room as soon as soiled, and none that is not perfectly clean should be used. Unless

there be suspicion of gonorrhœa, etc., the infant need not be subjected to the Credé-eye method. This is modern obstetrics as I understand and practice it.

Dr. Partridge writes me that in the April number of the *American Journal of Obstetrics* Dr. McLane will carefully describe the Sloane Maternity and its work.

916 *Fifteenth Street.*

ART. VI.—**Presbyopia—A Clinical Lecture Delivered at the New York Polyclinic, June 6th.**

By J. HERBERT CLAIBORNE, M. D., of New York, N. Y.

Gentlemen :—In my talks with you I am disinclined to deal simply with theoretical matter. As long as we can have some practical facts and cases, it is better to talk of them.

This morning's subject is of great interest to you—something that you can make use of at home—*presbyopia*. I do not know of any term that is so deceptive as this in the impression one gets from it. If you know what the term *presbyopia* means, you have a decided notion of the condition; but in teaching practitioners of medicine, I have been struck with the frequent miscomprehension of the word; many think it is *hyperopia*. It signifies "old sight" as compared with young sight—not necessarily very old, but relatively old as compared with young. From early childhood, the muscles of accommodation possess great power of contractibility. If you dangle a bright object before the eyes of little children, they focus it with the greatest possible ease, so that they may seem to have a convergent squint. The excessive power seems to be greatest in early youth, say between five and six years of age, and it lasts until adult age is reached. In very young people it has been taken advantage of in Europe, where they set children at work upon delicate and fine tapestry, as in the Gobelin tapestry works near Paris. It is all done with needles, and it was found after long trial that old people were unable to do it well; so they were compelled to employ children who

are able to see minute points more easily than old persons. These children do this work four or five inches from their eyes; it is very beautiful and fine, but it is done at the expense of eyes.

A child can be made to read at a distance of from three to five inches from the eyes, while an adult cannot look at an object as near as that and see it well for more than thirty seconds; if he attempts it, his eyes will close involuntarily, his head will swim, etc. As people increase in age, this point goes farther and farther off, until the capacity of seeing things close at hand becomes totally lost. At the age of forty or forty-five, we ought to stop doing this near work. It must be true that we were never intended to do it.

What are the constituents of hyperopia? Bear with me for a few seconds while I recall to your memory that the eye-ball is a shell, in which are contained two or three other shells. In the front is the cornea, through which light streams, etc. The muscle of accommodation is nothing but a ring muscle. I have often demonstrated this to the class on bull's or pig's eyes, where after tearing off the choroidal coat, the finger can be passed back of the iris and this muscle felt. You must remember this fact, for one gets a different idea of it from a drawing, which is generally a vertical section. It is a round muscle and has a continuous origin and a continuous insertion. All other muscles, except the sphincters, have their origin at one place, and termination at another; and the primary law of muscles is, that when they act, they shorten from origin to insertion. If my biceps contracts, I draw the insertion to the origin. Every muscle does that, and if it does not move its attachments, it at least, moves something.

In addition to these anatomical and physiological elements of an eye, there is another, known as the crystalline lens; it lies in front of the vitreous humor, and behind the iris. From the muscle of accommodation there runs down a ligament which has two flaps—an anterior and a posterior. The anterior is attached to the anterior surface of the lens; the posterior, to the posterior surface of the lens, enclosing it in a bag, and this bag is known as the capsule of the

lens. If this muscle contracts, it will necessarily be bellied in the centre; the length is decreased and its diameter increased. Under these circumstances it happens that this ligament, which is attached to the apex, is relaxed; the tissue, whatever that may be, upon which this capsule lies, will necessarily be allowed liberty. The crystalline lens is composed of material, which, when pressure is taken from it, springs forward, and in this way its antero-posterior diameter is increased. And observe, if you please, this peculiar characteristic, that when this muscle is at rest, the lens is flattened, since tension is made upon the anterior surface of the lens; when the muscle contracts, the lens swells by a passive act—simply from the relief of pressure.

This peculiar series of circumstances of the eye, is unlike anything else in the human body. The act of seeing near by, therefore, is accomplished in the first place, by the contraction of the accommodation muscle, and in the second, by the swelling of the crystalline lens.

What do we do when we look at an object near us? You will remember that the emmetropic eye is of such a length, that when parallel rays of light enter it, they become focused upon the retina without any effort of the eye. Such an eye, when regarding distant objects, *i. e.*, those at or nearer than twenty feet, is in the condition of a camera obscura; the light passes in and forms an impression upon the retina; it is a natural piece of work. Not so when near objects are seen, for rays of twenty feet are not parallel; they are divergent and will focus behind the retina; it is work that will tell upon your nervous system more than any other, and it is no wonder that children object to study from books.

It is a strange thing that when an object of twenty feet is looked at, an absolutely correct amount of accommodation is ready to focus it; if the object advances, the accommodation is increased; if it recedes, the accommodation is decreased. I look at that ink-stand, and focus it exactly and nothing else.

Look at an object approaching from twenty feet; in proportion as it advances, the muscle of accommodation will contract; you will then discover what is known as the am-

plitude of your accommodation—ranging from a distance of twenty feet, to a point more or less near the eyes. Eight inches is the physiological point at which adult people ought to see, though I doubt if any of you could continue focusing for more than thirty seconds at eight inches, and am inclined to think that ten or twelve is nearer the correct distance. Most adult people in reading, hold their book at ten or twelve inches. At this distance the power of focusing will remain for years, then at a certain time, which varies in different people, this power will become less, until at sixty or seventy it is entirely lost. At sixty, a man can read only the largest print we have in our test types; he will be able to see objects near him, but will recognize things more by their shape and size, than by their distinctness; but some accommodation is left him for his safety's sake.

There are two points, then, in vision, the near point and the far point. Ophthalmologists, so as to be understood all over the world, make use of the terms *punctum proximum* (P. P.), and *punctum remotissimum* (P. R.), to express the nearest point and farthest point of distinct vision. The difference between these points is the *amplitude of the range of accommodation*.

It is a strange fact, that of all the faculties man possesses, this muscle of accommodation is the first one to give away. At the age of forty he is not able to use his eyes with the same degree of ease with which he used them at thirty; and from this time on he passes down hill, losing more and more of this power, until he reaches sixty or sixty-five, when his accommodation is reckoned at zero.

Most people at forty years of age, need assistance to enable them to see clearly. Estimates have been made, and a table constructed to show that at forty, a certain amount of help is required; at forty-five, more; at fifty, more, and so on. Circumstances, however, alter cases, and it is best not to depend entirely upon what the table says; the nervous system and general health of the patient must be taken into consideration.

I have a case of presbyopia to show you to-day. This

woman ought to be able to read Jaeger No. 1, or No. 2, at ten or twelve inches; but if you give her a book to read, she will throw back her head and hold the book far off. She is presbyopic. Under these circumstances, what must we do for her? It is necessary to add to her eyes what she has lost. But if we do bring her up to eight inches, we will find that she will be able to read at eight inches and only at eight. What we should do is to assist the eyes, and at the same time give her as wide a range of accommodation as possible; hence we must first make an examination for refraction.

I have examined her and shown her to be emmetropic. She is forty years of age, and has gone five years beyond the age at which presbyopia is said to supervene in women. But she is a strong woman, as you can see, and she tells me she has had little sickness. I will now place a convex 1 D, or $\frac{1}{40}$ th, before her eye. You see now, she does not withdraw her head when I bring the print to twelve inches, and, as you have just heard, she says these glasses are comfortable and easy.

In conclusion, let this be your rule of action in prescribing glasses for presbyopia:—*Please your patient.*

ART. VII.—The Negro and His Death Rate.*

By E. H. SHOLL, M. D., of Birmingham, Ala.

EX-PRESIDENT MEDICAL ASSOCIATION OF STATE OF ALABAMA, ETC.

Those things should most concern us which come nearest home, whether we view them from a moral, economic, or scientific point of study.

To the physician practicing medicine in our Southern country at this time, the negro, from a medical standpoint, becomes necessarily a constant presence and consideration. To some of us whose lives have reached back in this country for thirty or thirty-five years or more, and who are

* Read before the Jefferson county Medical Society, June 9th, 1891, and by vote of the Society, sent to the *Virginia Medical Monthly* for publication.

familiar with the details of plantation life, and whose medical life was inseparable from that life, this medical study of the negro possesses a peculiar and irresistible fascination. He is one of us, the great and potent factor in the development of our prosperity now, as he has been in the past, "the hewer of wood and the drawer of water;" hence, whatever attaches to him in any of the relations of life, practically concerns those with whom he comes in daily contact. As physicians, our relations touch reflections apart from service detail to observe pathological conditions, and his attitude in this respect to the body politic.

Anatomically, it may be well to point out some of his differences from the white race, as these differences become, to a certain extent, explanatory.

In the September, 1874, number of the *American Practitioner*, Dr. A. W. McDowell, who was surgeon on duty at Benton Barracks during the late War, and who had among the ten thousand under his observation a very large opportunity of making accurate *post-mortem* investigations, gives his results as follows:

Every brain was weighed at the autopsies. That of the purest black—always the lightest—increased in weight through all the shades up to the pure white.

The lung of the negro was always much less in weight than that of the white man.

The liver was larger.

The spleen only half as large; and the lower bowel smaller.

Let us now consider more particularly the *lung*, as that is the side of this study which briefly claims our attention to-night—one becoming more and more important as the years go by.

Every observant physician has had his attention called to the increasing fatality among the negroes from pulmonary diseases, and the far greater mortality with them, relatively, than in the case of the whites. Some cynic has said, "that there is nothing so deceptive as figures, except facts;" but the testimony of the "silent city of the dead," with its passing pilgrims, is unimpeachable.

For a brief, but comprehensive statement of the comparative statistical mortuary rate of Birmingham, from which some percentages and practical deductions may be drawn, I am indebted to Mr. Henry M. Rosser, who has tabulated them for me from the report of the Health Officer from January 1st, 1890, to May 1st, 1891—sixteen months—on an estimated population basis of 27,000 in the strictly corporate limits, excluding the equal number of the immediately adjacent suburban population—17,550 whites, 9,450 colored. During that time there were 57 deaths from *pneumonia* among the whites, and 65 from the same cause among the negroes. That is, we have a percentage of deaths by pneumonia among the whites of 3.24; among the negroes of 6.88.

Of deaths by *consumption* among the whites during the same period, there were twenty-one; among the negroes, sixty-three. A percentage among the whites of 1.19; among the negroes, 6.66—a total death-rate from pulmonary diseases of whites of 4.43; of negroes, 13.54, or more than three times as great.

The percentage death-rate of whites from pulmonary diseases to the total death-rate of whites is 19.20; among the negroes, 22.56.

In order, however, to get a correct comparative percentage of deaths, we must equalize the figures of population, or we have an inaccurate estimate. On this basis, we have the percentage ratio to the total of whites—of blacks, 41.28, or more than double. In the case of the latter, the startling revelation confronts us that nearly one-half of the mortality of the negro may be set down to pulmonary diseases. This coincides with some of my experiences as Assistant Health Officer in Sumter county, of this State, some years ago, under the administration of that careful and painstaking Health Officer, Dr. R. D. Webb, now of our city. During one year among the negroes there, 43 per cent. died from pneumonia alone.

A retrospect, briefly taken, may not be altogether unprofitable by comparison. From April, 1856, until April,

1862, when my army life began, a large proportion of my practice was plantation work among the slaves, who were, in that section of Alabama, well fed, well clothed, well housed, carefully nursed when sick, and often hospitalized, and well treated. I have notes of my professional work, and have the sharp memory of a man growing old for the events of the far past; and I cannot show or recall, in all my service in those six years, one solitary death from *consumption* among the slaves of my district—that, too, where the population was not in the ratio of one black to two whites, but of at least eight or ten blacks to one white. There were deaths from *pneumonia*, of course, but they were largely among the aged, and infrequent by comparison with the present mortality.

Two questions naturally suggest themselves—*First*, What is the cause of this great difference in the death rate then and now? And, *second*, What, if any, the remedy?

In the discussion of Dr. Vivian Gaines' paper on the "Treatment of Pulmonary Phthisis," during the session of the Medical Association of the State of Alabama, in Mobile, in 1889, this matter of the increased pulmonary mortality of the negro was the inquiry discussed by myself, and the line of thought followed up by Drs. McDade, John Stewart and Wheeler. Suggestions of different kinds were made—Dr. McDade pointedly alluding to the great prevalence of syphilis among the negroes immediately after the War, to which I can bear witness, as a probable cause, and that the entailment of the remains of this disease still dominating the system led to the begetting of a race of children who would suffer from scrofula and consumption.

The disease, which was very infrequent among the slaves, still holds its sway over the free negro; and while it does, we may expect, if the poison is potential and transmitted, it will yield a race illy fitted to contend with any disease that they, the more easily, from natural environments, fall victims to.

Irregular hours, irregular living, exposure when illy clad, and meagerly fed, are necessarily also potent factors, but do not and cannot explain the specially great and in-

creased mortality among the negroes of this section of country. Some supreme law, far greater than the aggregate of all these latter, is doing its deadly work at a terrible rate.

Perhaps the sum total may be found by adding one other cause at work. This, too, comes as a habit of city life, and shows itself in other forms of disease in the white as well as, perhaps, influencing this matter of discussion, in the black. I allude to the immoderate use of liquor by some of the black race, whose offspring necessarily become less prepared to win in the battle of the "survival of the fittest."

What the remedy, if any, for this deadly work? I have no theory to advance, no practical solution to present. One thing I do know, that whatever elevates the race, purifies their morals—keeps them temperate in all things—will rapidly lessen their death rate; for if anything is proven as clearly as the finest mathematical demonstration, it is the fact that whatever purifies, elevates and ennobles, conduces to the greatest longevity consistent with the environments.

So far as lies in our power, we should adapt the means to the end, in every way, as philanthropists, doing what we can for these our neighbors and our friends, linked to some of us, in the history of the past, by the ties of faithfulness and devotion to our wives and children, that should never be forgotten—a memory that should be entailed upon the present generation, who have grown up since the days of the patriarchal *regime*—a memory that should live in acts of beneficence and uplifting while the ages last.

The Three Chlorides Elixir of Renz & Henry.—Dr. Dearing J. Robert, of Nashville, Tenn., writes that he has been using this frequently, and he likes it the better the more he uses it—especially as an alterative. It tones up the syphilitic system admirably when it has been pulled down by the use of iodides. It is an excellent tonic in convalescence from malarial and other febrile conditions.

Clinical Reports.

Three Successful Laparotomies in One Day.

By JOSEPH TABER JOHNSON, M. D., of Washington, D. C.

SURGEON GYNÆCOLOGIST TO COLUMBIA HOSPITAL.

Last year I sent the *Virginia Medical Monthly* an account of "nine successful laparotomies done in one month." I now send a brief report of three similar operations done in one day.

To the report of the nine cases, I might have added another operation; but at the time I presented the cases to the Medical Society of the District of Columbia, I could not be at all certain that the tenth patient would recover. She did get perfectly well, however. The case was so full of interest, that I made it the subject of a separate paper for The Southern Surgical and Gynecological Society, an abstract of the main points of which was published in the *Virginia Medical Monthly*, in October last. But it is not for a moment suggested that this record represents an average month's or day's work. The fact that it was quite unusual, is the chief reason for their publication.

CASE No. 1.—Miss V., age 23, was sent to my Sanatorium by Dr. Stone, of Brightwood, D. C., on March 10th, 1891. She had been under treatment for about ten years, or ever since her first menstrual period. Her symptoms were for several years chiefly reflex, and dysmenorrhœa disappeared after the period passed by. Gradually she became a great sufferer from more or less constant ovarian pains. She was the petted child of fond and generous parents, who had spared nothing in their efforts to contribute to her present comfort or final cure.

On examination, I found the left ovary enlarged and prolapsed, and bound down by adhesions, which also extended to the fundus of the retroverted uterus.

As she had already undergone much treatment by Drs. Stone, Slaymaker, and others, for the relief of these prolonged and bound-down organs, including electricity, without any permanent good, I had no hesitation in at once re-

commending abdominal section. This was gladly acceded to by all concerned.

After observing the patient for four days, I opened her abdomen, broke up the adhesions, removed both ovaries and tubes, which was diseased sufficiently to account for the symptoms.

The patient made an excellent recovery, and has remained well since.

CASE No. 2.—Mrs. O'B., white, Irish, aged 50, the mother of several children, entered my service at the Columbia Hospital in March last. She was a sufferer from a very large umbilical hernia.

She was unable to earn her own living or support her children; any lifting or straining caused the hernia to protrude to such an extent, that it nearly doubled in size. Its walls became so thinned-out, that rupture seemed imminent.

She was operated on for radical cure at 2 P. M., same day as Case No. 1. The hernial tumor contained no intestine at the time of operation, though it is very likely that it had done so when greatly distended. About five pounds of omentum and fat were removed, together with all the hernial sac, including the peritoneum lining it. The hernial opening was somewhat enlarged above and below the ring, and after dissecting out the edges of the old sac, it was closed with many sutures.

The patient had no unfavorable symptoms, and up to the present time there has been no evidence that she is not permanently cured.

CASE No. 3.—Was a French maid in the family of one of our wealthy citizens. She had all the characteristic symptoms of pus in the pelvis, associated with frequent and severe uterine hæmorrhage.

After several months of treatment in the house of her employer, she was received into my service at the Columbia Hospital. As the case seemed urgent, she was operated on at 3 P. M., on the same day as cases No. 1 and 2. One ovary contained about four ounces of bad smelling pus, and the tube on the opposite side about an ounce. Removal, irrigation, and drainage, accomplished a cure.

She is now perfectly well, and giving perfect satisfaction to her present employer.

Correspondence.

LETTER FROM LONDON.

British Gynæcological Society—Mr. Tait's Specimens of (1) Ruptured Tubal Pregnancy, and (2) Large Uterine Myoma—Dr. Bantock's Specimen of Cyst of Ovary, Twist of Pedicle, etc.—Surgery at Samaritan Free Hospital for Women—The Anæsthetics; Fibromata; Hysterectomy; Instrument—Bantock's Dry Dressing for Wounds—After Treatment—Silk-Worm Gut Ligatures—Distinguishing Features between Lipoma and Hygroma—Cases of Congenital Genu-Recurvarum.

Mr. Editor:—It is not my purpose to write a long paper, but merely to give a few practical thoughts relative to some of the surgical practice which I have been seeing in London.

I have been attending the meetings of the British Gynæcological Society (of which I am proud to say that I am a Fellow), and I must say, that these meetings were most interesting. I have been thoroughly convinced that a Fellow had better not present a specimen to that Society, unless he is certain that the specimen has undergone pathological changes, as he will incur the danger of not being allowed to reply to the discussion of his specimen, until the committee of pathology has examined the specimen and made its report.

Mr. Lawson Tait was to have read a paper at last night's meeting, but for lack of time it was deferred, and will be the first business transacted at the next meeting on June, 11th. He, however, presented two specimens, one a *ruptured tubal pregnancy*, in which the foetus was found dead, and had probably not attained to an age of more than six weeks; but the placenta had continued to grow until the rupture of the tube had been brought about. The other was a *large uterine myoma*, somewhat pedunculated. The specimen consisted of the uterus and the appendages. On examination, the uterine cavity contained a small polypus, which he said probably accounted for the hæmorrhage that necessitated the operation. The cervix was quite beyond the reach of

the finger, and consequently the operation of dilatation and curetting was impossible.

Dr. Bantock discussed the specimens, and stated that he had several times encountered a like condition in cases of uterine myoma, and that the removal of the uterus and the appendages, was necessary to save the lives of such patients.

Dr. Bantock also presented a specimen of *cyst of the left ovary*, which I saw him remove on May 20th. The patient was admitted to the Samaritan Hospital on May 2nd, and I had the opportunity of examining her with Dr. Bantock on May 4th. She stated that she had suddenly become very ill on May 2nd, the day of her admission into the hospital, and was then suffering from extreme pain and tenderness over the abdomen. She had a temperature of 101° F. On opening the abdomen, a medium sized unilocular cyst of the left ovary was discovered, and was almost strangulated from twisting of the pedicle, which had taken place from left to right. A blood vessel had ruptured, and there was a blood clot in the wall of the cyst as large as an orange.

Dr. Bantock stated, that in all cases in which he had encountered twisting of the pedicle, the tumor had turned from left to right, and asked why it was that twisting of the pedicle should occur suddenly?

Mr. Lawson Tait replied that he had operated upon about sixty cases in which there was twisting of the pedicle, and that the pedicle was twisted from left to right in every case except one. He thought twisting of the pedicle took place gradually, and that complete strangulation was not present until sometime after the pedicle became twisted.

I wish to say something relative to the *surgical practice at the Samaritan Free Hospital for Women*.

The anæsthetics in general use there are, ether, chloroform, and occasionally a mixture of alcohol, ether and chloroform, given by means of Clover's inhaler. The same administrator is in attendance for every surgeon of the hospital.

Fibroid tumors are not removed unless they become very burdensome; nor is the operation of *hysterectomy* performed unless the life of the patient is in jeopardy.

The plan of dealing with the *pedicle in supra-vaginal hysterectomy*, introduced by Koeberle, in 1864, is still in favor at the Samaritan. In hysterectomy for uterine myoma, the *instrument for securing the pedicle* is Bantock's modification of Koeberle's *serre-nœud*, made from *delta metal*, aided by one or two strong needles from the same metal for transfixing the pedicle beyond the wire. This instrument lies flatly on the abdomen pointing upward. While the slough is being removed by necrosis, some make applications of powerful antiseptics in order to render the decaying matter as harmless as possible.

Bantock's dressing for both the pedicle and the abdominal incision consists of plain, dry, gauze, cut into small, square pieces. He claims that by using the dry method, he mummifies the slough which becomes harmless and almost as hard as wood. He packs the gauze into every crevice around the pedicle in order that all moisture and fluid may be rapidly absorbed, which might otherwise burrow along, and finally find their way into the peritoneal cavity. At the same time the separation of the slough is very much hastened by giving the screw a few turns every twenty-four or forty-eight hours, and turning it as long as it turns quite easily.

The *after-treatment* of these cases is about the same as after ovariectomy, and consists in securing perfect quietude. No food by the mouth for twenty-four or forty-eight hours; no opium; nourishment per rectum, beef tea and wine, or brandy.

I have seen no exact pattern for performing this operation of hysterectomy, and indeed, it seems to me that after seeing so many cases at the Samaritan and other hospitals in London, it would be quite impossible to describe any one general plan to be adopted in performing the operation, since no two cases are alike.

The silk-worm gut is universally used at the Samaritan, both for closing the peritoneal surface as well as the abdominal incision. And I noticed that Dr. Bantock uses the same material for all perineal operations.

Through the courtesy of Mr. Edmund Owen, F. R. C. S., now Senior Surgeon to the Hospital for Children, Great Ormand street, I have had the pleasure of examining many cases of *surgical diseases of childhood*. The first class of cases to which I wish to call attention is, the *distinguishing features between lipoma and congenital cystic hygroma*. I know of no two diseases of childhood more liable to be mistaken, the one for the other, and where the treatment is so radically different—the one demanding removal, the other, very little, if any interference on the part of the surgeon. I know of no general work on surgery that gives in detail the differential diagnosis of these diseases by which a student could readily distinguish one from the other at a first examination, and as I had a special opportunity for examining many such, I will mention some of the distinguishing features.

In the first place, *congenital cystic hygromata* are composed of a great number of cysts, varying in size from a cyst as small as can be seen, to a cyst as large as an orange. These are composed of dilated lymph-spaces, and the lining of these cyst is continuous with that of the lymphatics. *Lipomata* are rarely found at birth, while hygromata are rarely found upon an extremity. However, there is a child now in the service of Mr. Owen, suffering from a very extensive hygroma of the external aspect of the leg and thigh; and another in which the disease occupies almost the entire right side of the chest. Both are painless, and possess a somewhat indefinite border. But in hygroma, there is usually a greater sense of fluctuation. This may not be the case, however, in cases of old hygromata where the fluid has been undergoing a slow process of absorption. Both hygroma and lipoma are covered by healthy skin, which shows a certain amount of dimpling on lifting them with the thumb and fingers; *but in lipoma*, the skin can always be lifted in places and distinctly separated from the underlying tumor. *Not so with congenital cystic hygroma*. This last constitutes the most important distinguishing feature, and is explained by the fact already mentioned, viz.: that

hygromata consist of dilated lymph-spaces, and that these dilated lymph-spaces extend into similar changes existing in the layer of skin.

I will mention two other cases now in the service of Mr. Owen at the Children's Hospital, viz.:

1st. Child 3 years of age with *congenital genu recurvatum*. In this, the tendons of the quadriceps extensors were divided by an open incision above the patellæ, and the child is regaining some powers to extend the legs again.

The second, is a case of a child four months old, with the same deformity treated by subcutaneous division of the quadriceps extensors at the same point as in the first case. The last operation has not been performed long enough to note any results.

J. A. GOGGANS, M. D., (of Alexandria City, Ala.)
London, England, May 30th, 1891.

Proceedings of Societies, Boards, etc

MEDICAL AND SURGICAL SOCIETY OF DISTRICT OF COLUMBIA,

[LLEWELLYN ELIOT, M. D., 1106 P St., N. W., Secretary.]

Clenliness in Obstetric Practice.

In opening the discussion of Dr. Bovée's paper, read March 16th, 1891 [see page 275], Dr. Hill regretted that Dr. Bovée had not referred more to the practice of obstetrics among general practitioners, and dwelt less upon the methods adopted in hospitals for lying-in women. He believes the practice of antiseptic midwifery is being carried too far. In his experience, clean water is sufficient for ordinary purposes. He has had many cases among the lower classes, but has had no bad results from the use of simply clean water for the doctor, nurse, and patient. He read from a letter of Dr. S. L. Weber, published in the *American Journal of Obstetrics* for March, 1891, giving the details of the methods of Professor Leopold, of Dresden, but he thinks very many of the details there given are unnecessary. He thought, to follow out these methods was carrying a good

thing entirely too far; and if all these precautions, as given by Dr. Bovée, were necessary in maternities, women had better stay at home to have their babies. Tait's idea of plenty of fresh clean water was preferable to this scrubbing and bathing with disinfectants. It is impracticable in private houses, and is useful only as a means of advertising. Dr. Hill never uses a douche before labor, and seldom after labor; if the lochia becomes offensive, he washes out the vagina and uterus. He is very positive about having clean linen and having the pad changed every six hours.

Dr. Eliot considers cleanliness in obstetric practice as of paramount importance. It means, stated briefly, a clean physician, a clean nurse, a clean woman, a clean bed, a clean room—in short, *everything clean*. A clean physician, according to the rules laid down by Prof. Leopold, is not to be found riding about in a buggy all day, for his rules require a bath in the morning, nail-brush, scrubbing for seven-and-a-half minutes, and sublimate solution for five minutes more. A clean nurse is found about as often as a clean physician; a clean woman, clean room, and clean bed, are generally found. He has, during the past few years, delivered, on an average, one woman every ten days, and has never used a vaginal douche, either before or during the first days after labor; many women never get a douching. He has never had a woman scrubbed from armpits to knees with either chemically or naturally pure water. His cases all recover without any complication or inconvenience. He presupposes, however, that all women and physicians follow the ordinary rules of hygiene, as regards baby-bathing. He does not regard physicians as clean, according to laboratory methods of investigation. He always washes his hands, if there is time—preferring the kitchen soap to the fancy kinds. The methods of Dr. Bovée are practicable in hospitals only. The tendency of the day is to be controlled by laboratory facts; but he will accept a clinical fact every time in preference to a laboratory fact.

Dr. Carraher said in large institutions these measures are necessary, but they cannot be put in use, nor are they necessary, in private practice. He related a case where a woman was confined on a canal boat. The stable-manure and other filth were in a room just adjoining the one in which she was confined, but she recovered as nicely as if she had been in the most perfect aseptic maternity. Among the colored people of the lower and poorer classes, he has not had the time, very frequently, to wash his hands, and his success among

them is good. If he were to attempt to scrub the hands and the woman, he would fail very often to find the necessary articles, and would, in many cases, incur the displeasure of the family.

Dr. G. B. Harrison occupied a middle ground between these two extremes. He believes "cleanliness is next to godliness," and thinks we can always carry a bottle of pellets of some antiseptic and put them in boiling water. He did not think Dr. Bovée had given sufficient weight to the virtues of boiling water; nor could he understand how Dr. Eliot could have a clean physician as a necessity to cleanliness, while he was claiming that doctors were all unclean. If we bathe the patient and the parts with a solution of an antiseptic, we will please and not offend the patient; they think we are doing something for their good. Boiling water as a disinfectant is as good as anything. He thinks the old-fashioned way of dry-rubbing the floor is preferable to almost any means of preventing germ propagation.

Dr. E. L. Morgan believes in the free use of solutions of carbolic acid and bichloride of mercury for washing the hands and arms of the doctor, as well as the patient. If we employ the antiseptic vaginal douche frequently, we will prevent many patients from having child-bed fever.

Dr. Wm. P. Carr said this was rather a pet question with him, and he does not think it is very well understood by the general practitioner. Hot water, and a solution of bichloride of mercury of a strength of 1 to 1000, will kill all germs and almost every spore. He does not think it necessary to go to such an extent, in private practice, at least, in scrubbing the patient, etc., as the paper read advocates. He always carries in his pocket antiseptic tablets, and invariably uses them in attending a puerperal case. He has never had any trouble from their use, and many times has he felt that he prevented complications by using them. During the past year, he has seen not less than fifteen cases of puerperal septicæmia in consultation practice; these cases should have been avoided; none of them died, it is true; but all were more or less seriously affected. He does not think carbolic acid solutions, as ordinarily used, of sufficient strength, and therefore are not reliable. To be of any benefit, the solution must be used of a strength of 1 to 50. Solution of biniodide of mercury (1 to 5000) is superior to the bichloride, and much less irritating. A large majority of the germs we are endeavoring to destroy are beneficial, and not detrimental, to the patient.

Dr. F. B. Bishop thought it very hard to prove a thing which did not exist, and it was hard to say what cases would have been exempt from trouble had the antiseptic douching been employed, and what cases would have suffered had they not been employed. He believes in hot water and cleanliness. We meet with patients who are very susceptible to the bichloride of mercury, even when used in very weak solution, and many cases are injured thereby that probably would have gone on to an uninterrupted convalescence had they not been employed. He believes that the beneficial results from the use of antiseptic douches are largely due to the hot water, which, by its cleansing properties, relieves the parts from clots, and which, by its astringent properties, closes the capillaries and renders them incapable, for a time, of taking up any infectious material that might be left in the passages.

Dr. Bovée, in closing the discussion, said he does not advocate using the nail-brush and washing the patient in private practice to the same extent that he considers it necessary in maternities. But he always washes his hands thoroughly with either a solution of the bichloride or the biniodide of mercury. As long as water is boiling, it is aseptic, but as soon as it begins to cool it absorbs whatever germs may be floating in the air, and thus it loses its aseptic character. He referred mostly to our carrying germs into the vagina on our hands when making examinations or manipulations. After using antiseptics, he always applies an occlusion pad to prevent the further entrance of germs.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

[W. S. GARDNER, M. D., 712 N. Howard St., Secretary.]

April meeting.—Dr. Henry M. Wilson, President, in the chair.

Permanent Drainage for Ascites.

Dr. Wm. P. Chum related a case of ascites, which he treated by tapping and permanent drainage with apparently good results.

Dr. B. B. Browne operated more than a year ago upon a woman with ascites, who also had an abdominal tumor (papillomatous.) There has been no return of either the dropsy or the papillomatous growth.

Dr. Geo. W. Miltenberger could not see why any malignant tumor may not, by irritation of the serous membrane, cause ascites. We often see ascites without any definable cause, and when a growth did exist, it seemed a very good reason for the presence of the fluid.

Dr. L. E. Neale said that in the case of a colored woman he had operated on, there was no assignable cause for the ascites, except the presence of a subserous uterine foetus. He removed the uterine appendages. The myomatous growth remained, but there was no return of the ascites. There was also a complete procidentia, but after the operation, he was enabled to keep the tumor in place with a soft ring. The tumor gradually diminished, and ultimately disappeared. Is the exposure and irritation of the serous membrane during the operation a sufficient explanation of such an alteration in its function, when the apparent cause of the ascitic extension remains?

Dr. Wilmer Brinton remarked, that in a case of cirrhosis of the liver in a male patient, tapping for the ascites had been followed by a permanent opening, which permitted drainage until the patient's death one month afterwards.

Dr. J. Whitridge Williams, remarked that the ascites accompanying papillomatous growths, was considered to be due, in great part, to direct exudation from the vessels of the growth.

Encapsulated Fibroid of Vestibule of Vulva.

Dr. B. B. Browne, exhibited a small tumor about the size of a large hickory-nut, and apparently a fibroid which he had removed from a point a little to one side of the median line, and between the clitoris and urethra, which pressed on the urethra interfering with micturition. The growth was easily shelled out, and the patient did perfectly well. It was the first growth of the sort he had seen in that locality.

Imperforate Rectum in Infant.

Dr. Neale related a case of imperforate rectum in a white male child, born at full term of healthy parents. The child was puny, weighing only $5\frac{3}{4}$ pounds at birth; and one inch within the anus the rectum was imperforate. Dr. T. Hanny operated when the child was two-and-a-half days old, very feeble and partly cyanosed. No anæsthetic was used; anus was cut through, the sarineal structures laid open, the coccyx removed, the rectum opened through the posterior wall just above the imperforate part, and its mu-

cous membrane stitched to the skin just behind the original aperture. The stitches sloughed out, and the large wound healed slowly by granulation. A copious discharge of flatus and meconium occurred during the operation, and the tympanitic abdomen disappeared. Profound shock and collapse followed the operation, the child lying motionless, the feet and lower limbs cyanosed, the face and head less so—jaw dropped, mouth opened, eyes closed, lids blue, surface temperature but little, if at all lowered. No cry. The features were frequently pinched or wrinkled from pain, becoming more or less blue at irregular intervals. In this condition the child would make no effort at suction, but would swallow two teaspoonfuls at a time of milk and brandy when poured into its mouth, rarely refusing to swallow, and never vomiting the food and stimulants, which were given freely and frequently. For nearly two days and a half did it remain in this state, partially rousing during the administration of food or other disturbance, and again relapsing. Even after this period, when the first decided improvement occurred, the child would frequently relapse and remain in this condition for hours at a time. The first two weeks of its life was passed in this manner. The digestive and urinary apparatus functionated normally. From the tenth to the fourteenth day these attacks gradually diminished, and ultimately disappeared. The child is now nearly two months old, but very feeble, and weighs only 5½ pounds. It has been reared chiefly on condensed milk. The dense cicatrix just about the seat of the old imperforation has to be dilated daily with the finger; another operation will be necessary. No diagnosis of abnormality in vascular system could be made.

Dr. Brinton mentioned a case of a child which lived nine or ten days with an *open ductus arteriosus*.

Dr. Miltenberger said that in Dr. Neale's case, the sphincters, etc., were perfect. On introducing his finger to the end of the *cul de sac* he felt what appeared to him the end of the gut bone. He thought no ordinary trouble could account for the symptoms in the case. The cyanosis would not clear up entirely and then recur. He did not consider the condition one of relapse. There was no feebleness of pulse or coldness of surface. The child would lie in an apparently comatose condition, with no evidence of sensation, and then recover. The first attack followed immediately the operation, and evidently from shock; but after two or three days it could not be attributed to this cause. There

was no chill or febrile condition. After the child had commenced taking food, he used quinine by inunction, and also small doses of dialyzed iron, and he believes with benefit from the latter. He was inclined to account for the condition in this way: A very feeble child had food forced upon it for eight or ten hours, and when it had taken in all it could, it apparently fell into a condition similar to that of vomiting animals, and when the supply of food was exhausted, it would recover and take more nourishment. This condition entirely disappeared after the first two weeks.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

The Session, held in Asheville May 26th-28th, was in every respect a most profitable one to the profession of North Carolina, and some papers were read and discussed which would benefit the profession generally if widely given to the journals. To the efficient Secretary, Dr. J. M. Hays, of Oxford, N. C., as well as to the wide-awake and active work of the local profession, was the credit of this most successful session chiefly due. Dr. McNeill's resolution to elect officers hereafter by nomination from the floor (instead of by an appointed Committee on Nominations, etc.) was adopted almost unanimously—there being but three negative votes. Nominees for President must have been members of the Society for five years, and must have attended two out of three of the last annual meetings including the one during which they are placed in nomination. The chief officers elected for the ensuing term are—Dr. W. T. Cheatham, of Henderson, *President*; Dr. T. S. Burbank, Wilmington, *First Vice-President*; Dr. J. M. Hays, Oxford, *Secretary*; Dr. C. M. Poole, Craven, *Treasurer*; Dr. J. A. Hodges, of Fayetteville, having declined the position of *Orator* for the next annual session, Dr. J. W. Long, of Randlemann, was elected in his stead; *Essayist* for next session, Dr. O. McMullen, of Elizabeth City; *Leader of Debate*, Dr. F. W. Brown, of Greenville. *Wilmington* was selected as the place of meeting during 1892, at such definite time as the local profession may hereafter designate. Under Dr. Cheatham's administration, we feel confident that this State Society will continue to grow in usefulness and in development. Every worthy regular doctor should join and take interest in his State Society as the professional representative of his State.

THE SOUTH CAROLINA MEDICAL ASSOCIATION

Held a two days' session in Anderson, S. C., June 9th and 10th. The President, Dr. Thos. P. Bailey, of Georgetown, in his Annual Address, is reported to have spent a part of his time in condemning the use of tobacco, whiskey, opium, etc., by physicians. Dr. Ashhurst, of Philadelphia, Pa., by invitation, delivered an Address on "Surgery of the Great Blood Vessels," which Address, by vote, will be published in pamphlet form for general professional distribution. Dr. C. W. Kollock, of Charleston, read a report of some "Catarrhal Cases." Dr. Geo. B. Dean, of Spartanburg, read a paper on "What is Conservatism in Abdominal Surgery." He also spoke of some points in the "Management of Labor." Dr. James McIntosh read an article on "The Race Question." Dr. Cornelius Kollock, of Cheraw, read a surgical paper. Officers elect: Dr. Bratton, of Yorkville, *President*; Drs. Pope, of Columbia, Geo. B. Dean, of Spartanburg, and ——— Crawford, of Rock Hill, *Vice-Presidents*; Dr. M. P. Ravenel, of Charleston, *Corresponding Secretary*; Dr. W. Peyre Porcher, of Charleston, *Recording Secretary*; Dr. C. L. Reese, of Charleston, *Treasurer*. The session of 1892 will be in *Georgetown*; date to be hereafter fixed.

Analyses, Selections, etc.

Most Remarkable High Temperature of 158° F., in a Girl.

During the May meeting of the Memphis Medical Society (*Memphis Med. Monthly*, June, 1891), Dr. Jones reported the case of a bright girl, 14 years old.

Three weeks ago she had tonsillitis, from which she frequently suffered. She was staying with a lady of intelligence, and an experienced nurse. She reported to Dr. Jones temperature of 103 or 104 or 105°. As he was never at his visits able to find any fever, he thought there must be some error. One day she telephoned that the temperature was 108°. He hurried down and found it 109. The tonsillitis was about well. He was alarmed and sent for Dr. Sale. Directly it declined. The next day the family reported that the index had gone to the top of the thermometer, which was graduated to 112° Fah., with room for perhaps 2° more. He went at once and found temperature 97°. The same day it again went to the top in the space of two or three minutes. For two or three days it reached this height sev-

eral times daily. Two weeks ago, the heat began breaking the thermometers, the mercury being expanded beyond the capacity of the bulb and tube. This occurred in the axilla and in the mouth—the break occurring sometimes in the bulb; sometimes along the tube and in plain view; so it was not from muscular action or contact with the teeth. Eight thermometers have been thus broken. The people are intelligent and honest, and there is no ground of suspicion of deception.

Dr. Sale, even by all this, had not been convinced, and ordered a thermometer to register 150° . While this thermometer is graduated to 150° , the index may register 9° , at least 6° higher. The first observation with this showed a normal temperature; on the second observation it registered 115° ; at the third, 135° . During the same night it registered 150° . Last night the mercury reached the top of the tube, but arriving there directly after, he found it $99\frac{1}{2}$.

Last night in the axilla the index reached the top, and being again placed in the axilla, the expanding mercury burst the thermometer.

The rises of temperature occur several times a day, and are very rapid. A peculiar feature is that the patient recognizes with great certainty the rise and fall of the temperature. The rise was accompanied by a peculiar sensation of the face—a benumbing—and the patient indicates the grade of the fever by the terms, numb, number, numbest. Usually when the temperature is rising, the hands and feet are found cold.

When the pyrexia is greatest, the condition becomes alarming; hands and feet are cold, the surface covered with clammy sweat; there is severe nausea, and the patient expresses herself as feeling bad. These symptoms go with the fever, and cheerfulness and well-being return, and when there is freedom from high temperature, the girl has no appearance of being very sick. She is pallid, but her strength is good.

The circulation is never accelerated beyond 10 to 15 beats to the minute, being usually 80. It has not recently been above 100, nor at any time beyond 120.

The pupils are generally normal, but at times the girl could dilate or contract them at pleasure, as an owl or parrot. Respiration is not much accelerated. At times there is oppression in the chest, probably from imprudent eating. While the hyperpyrexia lasts, there is always nausea and a sense of oppression in the chest.

The urine is normal in color, quantity, etc. She has had no recent malarial manifestations. Spleen and liver normal.

The girl is an athlete or contortionist, excelling in running, jumping, etc. Can place her feet behind her head and get in other incongruous shapes.

He attempts no explanation of the condition. When the temperature began, he supposed it due to malaria, and gave large doses of quinine for three days. With the idea of a nervous origin, he gave bromide of soda with gelseminum, and when kept quiet with these medicines the rises of temperature did not occur so often. At times the cold extremities indicated determination of blood to internal organs.

General condition is not worse than would follow a continued temperature of 102° . The paroxysms are not regular. In last twenty-four hours there were four rises in temperature, lasting never beyond three to four hours, usually much less time. The family keep an accurate record of temperature.

Dr. Sale read from *Jour. Am. Med. Ass'n.*, March 21st, 1891, report of a case by Dr. Galbreath, of Omaha, Neb., in which a temperature of 152° was seen by Dr. G., and the nurse saw it once at 172° . A few days later, Dr. Jones sent hurriedly for Dr. Sale to see his patient, and Dr. S. found him with pallid face, gazing at the thermometer, with index registering 116. Dr. Sale attended the case subsequently during Dr. Jones' absence. During this time there occurred pain and gurgling in right ileo-cæcal region, with the crushed-snow feel, and a drawing up of the legs, strongly suggested typhlitis or perityphlitis; but under repeated iodine applications, these symptoms disappeared.

Two theories have occurred to him: Since peritonitis was present in Dr. Galbreath's case, and in this case there were ileo-cæcal symptoms, he suggested the possibility that the high temperature might have been caused by the influence of these inflammations on the solar plexus, where some physiologists have located the heat centre. The other theory is, that in this case there was no fever in the usual acceptance of the term, but some peculiar electrical phenomena. If it were fever, the result or tissue combustion, the patient would long ago have burned up; while as it is, she is often placid, and expresses herself as being well until she feels numbness, indicating the rise of temperature.

It cannot be claimed she is a malingerer. Thermometers

have been broken under either arm, with the chest exposed and in the rectum. Placed in the mouth, the part projecting was broken under the doctor's observation.

Other gentlemen had been invited to see the patient. Dr. Williford found it at 109° . The oscillations were very great at times, dropping to $95\frac{1}{2}^{\circ}$.

Dr. Sale has seen her dilate the pupils at pleasure.

To the hand applied in axilla or under back, there is no sensation of unusual heat. The rise is not indicated by flushed cheeks, but by blue lips, pinched and changed expression of face. In the rectum the temperature has been found at 116° .

The girl is not of a nervous temperament. The doctor has known her for a year or two. She is sweet, amiable, and merry—not mean or tricky.

Dr. Jones had been taught that 110° to 112° was phenomenal and fatal. He once saw 112° in a man who suffered sunstroke while intoxicated, and died.

Dr. Saunders remembered a report of a case of injury of spine when 122° was recorded.

Dr. Turner saw the case, and with his thermometer found a temperature of 109° . Suggested trying the temperature with other than mercurial thermometer, in view of possible electrical influence on this metal.

Dr. Jones had tried a vitreous thermometer and this registered 115° , but the instrument was inaccurate and unreliable.

Dr. Krauss could not see how electrical influence could be exerted through glass, the typical non-conductor. His only theory was that the heat made in the body is part latent, part manifest; by some peculiar influence this latent heat, not usually indicated by the thermometer, was set free.

Dr. Crofford saw a temperature of $108\frac{1}{2}^{\circ}$ in a case of sunstroke, from which the man got well. Had no explanation of the present phenomenon to offer. Looked like a nervous or psychic disturbance, not, however, under will control.

Dr. Saunders has not yet learned a plausible theory even of the production of animal heat normally. He had seen 108° in yellow fever, 110° in sunstroke, death following in both cases. Oscillation from 150° to sub-normal in the space of a few minutes could occur only through some influence on the nervous system, and he conceived the condition to be a nervous exaltation of temperature, and not a fever. In all his life he had heard of no such case, and it is evident high temperature is not so dangerous as we have thought.

Dr. Williams was impressed by the fact that in both this case and Dr. Galbreath's case, with the rise of temperature, there was no slowing in the circulation. This coincidence may give some indication of the location of the heat centre. Irritation of the vagus slows the heart. May we infer that the heat centre is near the vagus origin? Once he saw 111° in the rectum after death from remittent fever.

Dr. Crofford has a family in his clientele in whose numbers, on any slight provocation, as following an ordinary chill, there is a temperature of 106° or 107° , which is maintained during the twenty-four hours. Consideration of the case in question led him to the conclusion that the temperature is the result of a nervous explosion, and not a fever.

Dr. Black had read Dr. Galbreath's report, and his conclusion was that from psychic, or some other cause, there was an ungearing of the heat centre and for a time heat ran riot; then driving the other way, gave the sub-normal temperature, and this recurred until there was a restoration of the nervous equilibrium. The ungearing was probably due to the inflammation in the peritoneum.

As to treatment, Dr. Jones said that gelseminum had been tried; antifebrin was given at first, but soon after a dose, finding a temperature of 96° or 97° , he had abandoned it in alarm. He has since found that these depressions were not due to the drug. When taken sick, the patient was in a menstrual period of four days, without pain or abnormality. Bowels are regular and healthy, requiring occasional mild laxatives. Digestion good, save when there is imprudence in eating. Respiratory and heart sounds normal.

Since the meeting, Dr. A. B. Holder has had the opportunity of seeing the young lady. By the courtesy of the attending physicians the family were to telephone him at a rise of temperature. They did so. He reached the house ten minutes later, but was too late. He found the patient quite bright and cheerful, and without the appearance of illness, except occasional nausea and "cramping" in the stomach or bowels. The temperature in the axilla was 98° . Presently the girl said, "now it is going up." He looked at once, and the index indicated 108° . As he watched, she said, "that's all," meaning it had stopped rising. During three or four minutes, as he sat by the bedside, the thermometer remaining in the axilla, the index in view, it remained at that point, the mercury returning to the bulb. At the end of about five minutes, as he still sat watching

her, she said, "Now it goes up again—look out!"—the latter expression being a warning to remove the thermometer to avoid its breaking. He removed it at once, and found the index standing at $114\frac{2}{3}^{\circ}$. It was an ordinary Hick's thermometer, and was graduated at 116° . He immediately shook down the index and replaced the thermometer. After remaining two minutes it registered 97° . A moment later he found the pulse 120. To the hand the skin gave the sense of moderate fever. As the temperature reached its highest, there was some increase of nausea and pain, but nothing in her condition indicating serious danger or distress. A spirit thermometer kindly lent by the signal office, reached 111° on one occasion, thus corroborating the testimony of the mercury.

[The report just given reminds us of the case of a young lady detailed some three years ago by Dr. Richard T. Styll, of Hollins, Va., but we are unable to lay our hands on the journal to which the report was contributed.—Ed. *Va. Med. Monthly*.]

With reference to the report given by Drs. Jones and Sale, the *Memphis Medical Monthly* says, editorially:

"No gentlemen stand higher than do these for truthfulness and for accuracy of clinical observation; besides, the statements made there may be corroborated by other medical men who are well known to the profession for their probity and ability.

"Notwithstanding all the experiments and theories that have from time to time been tried and advanced to explain the nature of pyrexia, we are no nearer a correct understanding of its essential principle, and are forced to be content with a knowledge of its physical phenomena. These phenomena consist in the expansion of mercury and in numerous symptoms observed in the animal economy; and so thoroughly have we learned from accumulated experience and experimentation that a body heat of 106° or 107° F., is dangerous to life, that we have come to look upon it as a grave symptom unless it can be quickly controlled. Therefore, when we accept the statement of careful observers that they have recorded a temperature of 158° F., not once, but several times, in the same patient, we are forced to confess that we have met with something that menaces an upheaval of all our preconceived ideas of fever and its effects.

"Fagge in his excellent work (*Principles and Practice of Medicine*, Philadelphia. P. Blakiston & Co., 1886), speaking of hyperpyrexia, says: "Cases in which the thermometer

risers to 109° to 110° are very exceptional, and most observers think they are invariably accompanied by severe and alarming symptoms."

"While this may be so, numerous cases are on record where the temperature went higher and death did not ensue, and they have been denominated by Dr. Donkin (*Brit. Med. Jour.*, 1889,) as "paradoxical temperatures." Donkin's first case was that of a nurse convalescing from enteric fever. The thermometer was found one night to register 110° . Afterward, very high temperature was repeatedly taken, on one occasion 111.6° . No symptoms accompanied this reading beyond a feeling of "flushing," or "rushes of heat." In this case the fever was evanescent in character. Once the thermometer rose to 107.2° in right axilla—five minutes later it was only 98.6° . Donkin says the idea of imposture was well kept in mind, and the patient carefully watched.

"Mr. J. W. Teale (*Clin. Trans.* 1875, Fagge *ibid*), reports the case of a young lady who, by accident, had several ribs broken, and afterwards suffered great tenderness over dorsal vertebræ. Two months later her temperature was one day taken at 110° , and afterward the index of the thermometer was on four occasions buried in the bulb at the top of the instrument at a point above 122° . She was at first in a very weak state, but gradually improved and regained fair health.

"Dr. Moxon (*Guy's Hosp. Reports*, 1879), observed a remarkable instance of high temperature. The patient, a girl of 22, had been in the ward of phthisis ten months; on the evening of July 25th, her temperature was 107.4° ; one hour latter, 110.8° . She was suffering slightly from dyspnœa. The next morning the thermometer stood 99.8° . During the next few months the most extraordinary variations of temperature were recorded. On one occasion was obtained simultaneously a reading of 102° in one axilla, one of 114° in other axilla, and one of 107° in mouth. On changing over the instruments, the highest temperature was gotten in axilla where it had before been lowest, that of the mouth being 104° . Another day a small registering thermometer gave 102.6° in one axilla, while another one in other axilla gave 109.4° . Directly afterward, two large instruments without indices were used, the patient's arms being held all the time. The temperature stood at 103° on each side. This girl died of her lung trouble, March, 1880.

"Dr. Galbreath, of Omaha, reports (*Jour. Am. Med. Ass'n.*, March 21st, 1891), a case of peritonitis—also in a female—

in which he observed a temperature of 153° , and the nurse saw it at 172° .

"Dr. Donkin reported eight cases; and it is curious to note all these—Dr. Moxon's, Teale's, Galbreath's, and the case now reported by Drs. Jones and Sale—occurred in females, and that they are all similar in that the fever was evanescent.

"We can account for these extraordinary high temperatures by no rules we now have; they are contradictory to deductions drawn from years of experience and experiment; they are, as Dr. Donkin says, paradoxical to all established facts. Dr. Sale's theory that they are caused by an influence on the solar plexus, may be capable of demonstration, but it has not been demonstrated. His theory that it is due to some peculiar electrical influence may be the correct one, but we must trust he may be able to furnish the profession some confirming testimony."

Some Practical Points in Abdominal Surgery.

In the paper read by Dr. John H. McIntyre, of St. Louis, Mo., before the State Medical Association of Missouri, May 21st, 1891, his first point related to *anæsthetics*, the safest and best of which, he stated, is *bichloride of methylene*, used in Junker's Inhaler. He has used it in laparotomy work for the past ten years without a single untoward symptom, and with the greatest satisfaction; and, upon many occasions, he has put it to as severe a test as it is possible to put an anæsthetic. By its use, anæsthesia can be promptly induced, and safely maintained, for any desirable length of time, and it is rarely followed by nausea and vomiting. By the use of the inhaler of Junker, over-dosing is next to impossible; in reality, the patient takes inspired air, charged with the vapor of bichloride of methylene, and it is surprising what a small quantity is required in doing a prolonged operation.

Short incisions constitute another point of excellence, and should never be extended beyond the point of necessity in removing a growth of given size, without bruising the tissues. In removing the ovaries or Fallopian tubes, or both, it is rarely that the ventral incision need be over two inches in extent.

In dealing with *adhesions*, perseverance, by well-directed effort, will always succeed—remembering, however, that violence is always harmful, and the necessary force should be that of gentle momentum. *Intestinal adhesions* should

be separated as far from the gut as possible, for by so doing the danger of hæmorrhage is much lessened; they should be carefully examined afterward, as the placing of a Lembert suture in the proper place, at the opportune moment, will prevent the mortification of a future fecal fistula.

In the *management of the pedicle*, he always uses Japanese cable silk, transfixing and tying the ordinary surgical knot, when dealing with large tumors. For *removal of the appendages*, he is partial to the Staffordshire knot of Tait.

"When in doubt," he always resorts to drainage, and prefers the Keith tube to all others. He is a thorough believer in flushing the abdomen with a large quantity of hot distilled water. It is marvellous sometimes to see how many blood-clots can thus be washed out, even after careful sponging; besides, it is one of the best methods of relieving shock.

Closure of ventral wound can best be done with silk-worm gut; it is the *ideal suture*, as it is round, smooth, and very strong, and can be rendered perfectly aseptic. As it is rather stiff, it should be steeped for a few hours before using in a solution of some kind, so that it can be tied tightly. It should be threaded at each end upon straight or slightly curved veterinary needles. The needle, being held in the grasp of the Spencer-Wells needle-holder, should be passed from within outward, always including the peritoneum. Sutures should be placed five or six to the inch. The frequent cause of ventral hernia following abdominal section is an insufficient number of sutures.

As to the *after-management*, for the first twenty-four hours nothing should be taken into the stomach except a little hot water; bits of ice chewed or swallowed do not relieve thirst. The second day a little barley water may be allowed, and on the third day the patient can be promoted to a chicken wing; when, afterwards, if everything goes well, almost any light diet may be allowed. When *pain* is present, he uses but little morphia, on account of its tendency to arrest secretions, and thereby prevent the elimination of morbid material. But in its stead, for more than a year past, he has used *antikamnia* with happy effect. It soothes and tranquilizes and lessens the tendency to rise of temperature. *Stitch-hole sinuses* can best be obviated by early removal of the sutures. It is rarely that he allows sutures to remain in the ventral wound longer than the eighth day, and he often removes them as early as the sixth. *He who essays to do abdominal and pelvic operations should, by pre-*

vious observation and training, be so fitted for his work that, when he comes into "action," he will be "ready for anything, and surprised at nothing."

The *best place* in which to obtain the highest grade of success is not in large general hospitals, neither is it in "the cottage by the wayside," but in a small especially prepared establishment, under the absolute control of experienced management.

Too Much Surgery—A Plea for Medicine.

Under the title of "A Protest Against the Reckless Use of the Knife," Dr. M. Yarnall, of St. Louis, Mo., has contributed an article to several of our exchanges which, though perhaps a little too vehement, and hence open to misconstruction, yet contains some facts well worth republishing. He says that a hecatomb of women survive to tell the story of innumerable operations that have been performed on their wombs—not one of hundreds of which operations was necessary. Not a few unnecessary deaths have resulted from such operations, while many more have been invalidated by them. He claims that local surgical treatment, in three-fourths of the cases so treated by the professional gynæcologist, is unnecessary, as the aches and pains complained of by the patient are symptomatic of disturbed function only. It is true, the practitioner is not altogether to blame for such local treatment, for the fashionable craze is yet on the people, and the morbid craving of many women will not be satisfied until they are operated on. It will require time to modify the craze for this wholesale surgical uterine treatment. But sooner or later it will pass away, when physicians come more prominently to the front to insist upon, and prove the positive benefits of well-tried and established plans of medical treatment, as safer, surer, and better for the good of the patient. In enumerating a few of the procedures of very recent years that are, to a greater or lesser degree, passing into oblivion, except in rare cases, he instances the "bilateral," and "antero-posterior sections of the os," the elytrorrhaphies, the sewing up of small lacerations of the cervix, etc.

Some time since, as an experiment, Dr. Yarnall selected a number of consecutive uterine cases, not one of which really required an operation; but he suggested to each that perhaps in her case an operation would be required, or that such would possibly benefit her. Almost without exception, each patient was willing—some, indeed, were determined—to have something radical done at once.

A year or so ago, an eminent surgeon remarked that he had never, nor had his father (who was a large practitioner), met with a case of laceration of the os that was severe enough to require operative treatment. Dr. Yarnall, however, considers such a doctrine for general practitioners as an error on the conservative side. He has had one notable case where the woman became insane until she was radically cured by closing the lacerated margins of the os. When an operation is required beyond all question, let it be performed—*not before*. But it is against indiscriminate operations that he protests. The abdominal surgeon should be honest; and if he sees it possible to secure relief by other means than the excision of important sexual organs, he should recommend them. Surgical mutilation is too desperate a placebo to be commonly resorted to until every known or reasonable medicinal treatment has been exhausted.

Among means to be resorted to before relinquishment to the knife are moral treatment, in conjunction with attention to the general physical conditions, change of mode of living or of household surroundings, the use of electricity; and the various tonics that specially influence the uterine system. "Dioviburnia," he thinks, stands first of all useful combinations we now have at command. As is the case with all tonics, no matter for what object exhibited, it requires patient administration and time to secure its best effects. He concludes with the sentence: "A little less surgery; a little more conservatism."

Aristol in Cutaneous Diseases

The results obtained from the use of aristol by Dr. Iginio Sormani, in the Ospedale Maggiore, in Milan, are very satisfactory, and even far surpass expectation. Some of the cases had been previously under treatment without deriving any material benefit. Of especial importance is a case of *ulcerating epithelioma* extending from the ala nasi to the eye (the diagnosis was confirmed by microscopical examination). Concentrated solution of resorcin had been employed without noticeable improvement; and the thermo-cautery and curetting were also unsuccessful. As early as six days after the application of a 10 per cent. ointment of aristol cicatrization set in, and after thirty-five days a firm cicatricial tissue had formed. *Ulcerating lupus* and *scrofuloderma* were treated with aristol with much success, although a number of well-known remedies had been previously tried without

avail. A case of extensive *ecthyma of the leg* in a man is also reported, in which the eruption could be made to disappear by the use of calomel, but constantly recurred; after the application of an aristol ointment, however, a formation of firm permanent cicatricial tissue took place. Numerous cases of *ulcer of the leg* were also treated successfully with aristol. Sormani concludes that on the ground of his experience and that of others, he regards aristol as an excellent remedy, which, in many respects, is superior to iodoform. It can be readily applied, and *is non-poisonous*, as is shown by the fact that even after prolonged application of aristol to extensive ulcerations, no iodine can be demonstrated in the urine. We are, however, not as yet in a position to dispense with the other remedies and make use exclusively of aristol.—*Bolletino Della Poliam Bulanza*.

Metastatic Abscess and Cellulitis of the Orbit following Double Suppurating Chancroidal Buboës in the Inguinal Region.

Dr. V. H. Würdemann, of Milwaukee, Wis., reports this case in full (*Amer. Jour. Ophth.*, May, 1891), with the statement that he has been unable to find a similar case on record. A young Englishman had chancroids, followed by suppurating buboës in both groins, which were opened, antiseptically dressed and pus ceased to form after a couple of dressings. In a few days, Dr. W. found irido-cyclitis; anterior chamber, swollen; pupil irregular from synechiæ; considerable flocculent deposit in anterior chamber; pain and photophobia intense; vision reduced to perception of hand before face. Panophthalmitis set in a week later. Scarification of chemosed conjunctiva and canthotomy gave temporary relief. Axillary glands became painfully swelled, but did not suppurate. Exploratory incisions failed to show pus in the orbit. Two days later, pus presented near insertion of the external rectus, when the globe was enucleated, releasing a large quantity of pus from a retro-bulbar abscess in the capsule of Tenon. Pus discharged freely for several days. Symptoms rapidly improved; patient left hospital two weeks later—gaining in flesh and health until an artificial eye was well borne in a month. There was no syphilis in the case. The orbital affection was not of a chancroidal nature, but the doctor thinks that it was due to the deposition of a mycotic thrombus from one of the other structures more directly implicated, in the orbital veins, which caused suppuration and extension of the disease to the other parts. All of the systemic symptoms were septic in char-

acter, and the orbit seemed to be the principal focus of infection, for all the dangerous symptoms ceased after the operation.

Chronic Nephritis Successfully Treated by Hyperdermics of Chloride of Gold and Sodium, with Iodide of Manganese.

Dr. C. H. Boardman, of St. Paul, Minn., reports (*North-western Lancet*, June 15th, 1891), the case of a lady, age about 50, whose sister, father, and mother, died of Bright's disease. Last summer, she began having regular, though not severe headache every morning; but a cup of coffee would partially relieve it in a short time till the next morning. Nothing pathological was found in the urine passed in the morning; but in that passed later in the day, a small quantity of the albumen, casts, and some free epithelia were always apparent. A few years before this, a faint mitral systolic murmur was discovered, with slight dyspnœa. Nitrogenous food was almost entirely suspended; milk was given freely and Basham's mixture was prescribed in full doses; but the headache persisted. At various times pills of sodium and gold chlorides and amyl nitrite were given, but without apparent effect. Later in the summer the ankles became cedematous, and so continued at intervals during the winter.

Influenced by Dr. White's paper in *Medical Record*, March 21st, 1891, he sent to New York for the solution referred to, of chlorides of gold and sodium with iodide of manganese; and after getting it, he began using it hypodermically with Koch's syringe. Dr. White recommends that the dose of the solution should be one drop in five minims of a 5 per cent. solution of carbolic acid; if reaction occurs after this, raise it gradually, but *he warns against the use* of more than four or five drops at one time of the chlorides' solution. The reaction is similar to that following the use of the Koch's lymph, though perhaps less pronounced. Its use is first followed by a sense of well being, and thus reaction comes on. The third dose given by Dr. Boardman was three drops, causing a rise of temperature to 100°, which continued from this time, for a few days—three drops being given every other day. The temperature gradually dropped, until after two or three weeks, when it again became normal. When Dr. Boardman read his paper before the Ramsey County Medical Society, May 25th, he stated that "the report of to-day is that of an *absolutely well condition*." He is anxious for others to try the remedy to see whether his good result

was a mere accident, or whether there may be really something of value in it.

Dr. Boardman adds that Dr. White, in a personal letter, declined to make known the formula of his solution until such time as its merits shall become established. [We had hoped that reputable practitioners of this country had learned a severe enough lesson from the quackish secrecy of Prof. Koch's "tuberculin" to save them from the just condemnation of scientific students of medicine, because of all such attempts at concealment, unless, indeed, they propose to join the ranks of the nostrum venders and secret medicine peddlers.—*Ed. Va. Med. Monthly.*] The preparation used by Dr. Boardman, however, can be procured in one drachm vials of Frost & Brown, St. Paul, Minn.

Ichthiol in Diseases of the Genitalia of Females.

Dr. Richard Bloch (*Jour. de Med. de Paris*, May 10, 1891,) speaks most highly of the value of ichthiol in the treatment of various inflammatory diseases of the female genitalia. He considers it far superior to nitrate of silver, creolin, or carbolic acid. It seems to have a specific action in diseases of genital mucous membranes, but produces no local or general reaction, and is not in the least toxic. Intra-uterine injections of 10 per cent. solutions of ichthiol in glycerine are of great value, and produce no untoward symptoms; but the application of pure ichthiol to the vaginal mucous membrane produces slight erosions, and therefore occasions some pain. The drug diminishes both vaginal and uterine discharges. In acute inflammations, whether blennorrhagic or not, it is most efficacious. In metritis of the cervix it is most valuable, and in cervical erosions the application of the pure drug will cause prompt healing.

Syzygium Jambolanum (Jambul) in Diabetes Mellitus.

Prof. Lamaschen, of Kasan, tried this West Indian plant in eight cases of diabetes mellitus. In each case, after large enough doses—5 to 10 drachms of the powder in 24 hours—for several days, the urine and sugar decreased in quantity within a few days, and the thirst and other diabetic symptoms lessened, and the improvement remained for a time after discontinuing the treatment. But the sugar did not completely disappear in any case. The jambul caused no disagreeable effects, and, in fact, the patients generally increased in strength. He thinks the contradictory records of other clinicians must arise from their use of too small doses, or of inferior specimens.

Listerine in Summer Disturbances of Children.

Dr. D. J. Roberts, of Nashville, Tenn., says (*South. Practit.*) that in fermentative disorders of the alimentary canal in the young, middle-aged, or old, listerine has given most satisfactory results. In the summer diarrhœa of children, Dr. I. N. Love, of St. Louis, speaks very highly of it, given in combination with glycerine and simple syrup. A formula that Dr. Roberts has time and again used—in fact, has almost become routine with him—is as follows:

R _y —Bismuth sub-nit.....	3 ss.
Tr. opii.....	minims xx.
Syr. ipecac.....	
Syr. rhei arom.....	āā 3 ij.
Listerine	3 ss.
Mist. creta.....	3 j.

M. Sig.—Teaspoonful not more frequently than every three or four hours. For children about a year old.

Neurosine.—The new and useful neurotic prepared by Dios Chemical Co., of St. Louis (manufacturers also of "Dioviburnia,") has the following formula: Each fluid ounce contains 5 grains each C. P. bromides of potassium, sodium and ammonium; $\frac{1}{8}$ gr. bromide zinc; 1-64 gr. each of ext. belladonna and cannabis indica; 4 grs. ext. lupuli, and 5 minims fluid ext. cascara sagrada with aromatic elixirs. While we have not given "Neurosine" a trial, its formula shows that it must be a neurotic of very general utility. The enterprising Company will send a sample bottle free to any physician who will pay express charges.

Thymol in Chyluria.

Surgeon-Major E. Lawrie reports (*Lancet*, Vol. I, 1891) that he has cured two cases of chyluria dependent on filariæ in the blood with thymol. He administered it internally in one grain doses every four hours, gradually increasing it to five grains a dose.

Composition of Antikamnia.

According to the *Pittsburgh Medical Review*, May, 1891, different investigators have arrived at essentially the same results, namely, that antikamnia is composed of about 7 parts of acetanilid, 1 part of sodium bicarbonate, and a small amount of tartaric acid.

Book Notices.

Surgical Bacteriology. By N. SENN, M. D., Ph., D. Professor of Surgery in Rush Medical College, and in the Chicago Polyclinic, etc. Second Edition; thoroughly Revised. Philadelphia. Lea Brothers & Co. 1891. Cloth. 8vo. Pp. 271. Price, \$2. (From Publishers.)

A most important companion book of the best textbook of Bacteriology in general for physicians, is this work by Dr. Senn. But to the surgeons who are students of the science of surgery, and to whom we must look as leaders, this treatise is *essential*. As compared with the first edition of 1889, the present one is a thorough revision; and while the number of pages and the price of the two are the same, yet by the non-use of "leads" in the new edition, room has been secured for the addition of about thirty or more pages of new matter, compiled from the experience of the author and the contributions of other bacteriological students, up to the end of 1890—so far as such experience and contributions relate to advances in surgical bacteriology.

Wood's Medical and Surgical Monographs. Published monthly. \$10 a year; single copies, \$1. Vol. X, No. 2, May, 1891. Paper. 8vo. About 270 pages.

The contents of this May number are: "Differentiation in Rheumatic Diseases" so-called—14 pages, illustrated by two full-page plates—by Hugh Lane, L. R. C. P., etc.; "Mental Affections of Childhood and Youth, and Other Papers"—about 155 pages—by Dr. J. Langdon Down; "Cure of the Morphia Habit"—about 60 pages—by Dr. Oscar Jennings; and "Notes on the Examination of the Sputum, Vomit, Fæces, and Urine"—by Sidney Coupland, M. D., F. R. C. P.

Wm. R. Warner's Therapeutic Handy Reference Book for Physicians. Philadelphia, Pa.: Wm. R. Warner & Co. 1890. Cloth 12mo. Pp. 119.

The physician who supposes this to be simply an advertisement book of the most estimable pharmacal house of Wm. R. Warner & Co., of Philadelphia, will find himself vastly mistaken after running his eyes over its pages. It gives items of such daily value as the laws of combination of medicine, tables of weights and measures, describes the art of prescription writing, has a posological table, medical

formulary alphabetically arranged as to diseases, covering about 60 pages, rules of memorizing doses of medicines, list of incompatibilities, poisons and their antidotes, ready method in asphyxia, signs of pregnancy, table for calculating date of expected confinement, time-table of digestibility of different foods, directions for making post-mortems, useful formulæ, etc. Subscribers to this journal should write to Messrs. Wm. R. Warner & Co., of Philadelphia, for a copy. Price is not stated.

Electricity—its Application in Medicine and Surgery. By WELLINGTON ADAMS, M. D., Lecturer on Electro-Therapeutics, University Medical College, Kansas City, etc. Two Volumes. 1891. George S. Davis, Detroit, Mich. 12mo. Vol. I, pp. 113; Vol. II, pp. 129. Paper. Price, 50 cents for the two volumes. (From Publisher.)

These handy volumes of 240 pages form a brief and practical exposition of modern scientific electro-therapeutics, and are publications of "The Physician's Leisure Library Series." The work well covers the field of practical instruction as to the principles of electricity for therapeutic purposes, giving descriptions of batteries, electrodes, etc., and the modes of applying different forms of electricity to pathological conditions. It is cheap, instructive to those who wish to study electro-therapeutics, and useful as a guide to the practitioner.

Collected Contributions on Digestion and Diet. By SIR WM. ROBERTS, M. D., F. R. S., Professor of Medicine in the Victoria University, etc. Philadelphia: Lea Brothers & Co. 1891. 12mo. Pp. 262. Cloth. (From Publishers.)

This volume embraces all the contributions which the author has made to subjects relating to digestion, dietetics, and dyspepsia. Section I, of about 90 pages, relates to digestion and digestive ferments; Section II to dietetics; Section III to preparation of food for invalids; and Section IV to the acid dyspepsia of healthy persons. The author does not attempt a systematic work, nor indeed a text-book; but, in his several contributions here collected, he does present facts and deductions worthy of the careful reading of every scientific practitioner of medicine. While not strictly a therapeutic work, he discusses the simple subject of dyspepsia in its usual forms in such a manner as to throw out valuable dietetic and therapeutic suggestions of great value to the practitioner. An index is added to help to make reference to subjects.

Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By JOHN V. SHOE-MAKER, Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in Medico-Chirurgical College of Philadelphia, etc. Volume II of a "Treatise on Materia Medica, Pharmacology, and Therapeutics." Being an Independent Volume upon Drugs. Philadelphia and London: F. A. Davis. 1891. 8vo. Pp. 675. Cloth; Net, \$3.50; Sheep, \$4.50. Post-paid. (From Publisher.)

Since this is an "independent volume," and "sold separately" from the first, it is somewhat confusing for it to begin with page 355. On this page begins the alphabetical arrangement of all the pharmaceutical therapeutic agents or drugs—including every preparation in the U. S. Pharmacopœia. This volume is, indeed, a complete encyclopædia of modern therapeutics, in condensed form. It gives special consideration to the diagnosis and treatment of poisoning by the more active drugs. The work also serves an epitome of the present state of American medical practice. The actions and uses of all the noteworthy new remedies up to date of publication are given in this book—including even the "spermine" of Brown-Sequard, and the "tuberculine" of Koch. In short, the author has sought to combine all the practical information useful to the physician that was possible to include in one volume, so as to make it an indispensable book to him, as well as to the student. Seven full pages of formulæ for hypodermatic uses of a number of drugs are given. Then follow six pages, double column, very small type, giving a table of doses. The "index" is thorough—triple column, small type, and occupies ten pages. All in all, this is a work of *very* great value to practitioners.

Medical Symbolism, in Connection with Historical Studies in the Arts of Healing and Hygiene. Illustrated. By THOMAS S. SOZINSKEY, M. D., Ph. D., Author of "Culture of Beauty," etc. Philadelphia and London: F. A. Davis, Publisher. 1881. Demi 8vo. Pp. 171. Cloth. Price, \$1 net. (From Publisher)

This is No. 9 in the "Physicians and Students' Ready Reference Series." This was the last work of the talented young author before his death in Philadelphia in 1889. It shows an amount of historic research that was truly remarkable for an active practitioner. Every page of it is instructive and interesting. Every practitioner and young graduate should read it carefully in order that he may

know something of the symbols of his profession that have come down from ancient mythological times. It is full of instructive interest to trace the changes of these symbols through the centuries until the last of them—the gold-headed cane—became adopted as indicating that its user was a physician. A synopsis of the book cannot be given in the space allotted to a book notice; yet it should be emphasized that every practitioner interested in the history of his profession should get this book and read it for the sake of the information it gives him concerning matters he is often asked about by literary and educated patients.

Diabetes—its Causes, Symptoms, and Treatment. By CHAS. W. PURDY, M. D., Author of "Bright's Disease and Allied Affections of the Kidneys," etc. With Clinical Illustrations. Philadelphia and London: F. A. Davis, Publisher. Demi 8vo. Cloth. Pp. 184. Price, 81.00, (From Publisher.)

This carefully prepared monograph is No. 8 in the "Physician's and Student's Ready Reference Series." In the geographical distribution of diabetes mellitus, it is noted that it is far more prevalent in New England than in the Southern States—the death-rate from diabetes to the total number of deaths in Vermont being 6.36, whereas it is .88 in Mississippi; .76 in Texas; .63 in South Carolina, and only .55 in Alabama. In Arkansas, however, the rate is only .70, although the States immediately around it give a much higher rate. The practical value of this book, as we regard it, is so great that we would feel that we had scarcely done our duty unless we urged its careful study upon any practitioner who may have a case of diabetes in his practice—more especially diabetes mellitus. The food tables for diabetics, given some time ago by Dr. Ephraim Cutter, should go along with those given in this little volume.

Taking Cold. By FRANCKE H. BOSWORTH, M. D., Professor of Diseases of the Throat, Bellevue Hospital Medical College, New York, etc. 1891. George S. Davis, Detroit, Mich. 12mo. Pp. 69. Paper. Price, 25 cents. (From Publisher.)

This number of "The Physician's Leisure Library," published monthly, is a good one for all practitioners. The rationale of how we take cold is well stated; the means of prevention by clothing, bathing, etc., are forcibly presented. As to the local treatment of acute rhinitis, special prominence is given to sprays, etc., containing cocaine. For

"cold in the head," the author recommends heat, by means of hot water pack laid across the forehead and bridge of the nose, or nasal douches of hot water—entering one nostril and escaping through the other. Many other useful hints are given, which make this book well worth attentive reading.

Fever—Its Pathology and Treatment by Antiseptics. By HOBART EMORY HARE, M. D., B. Sc., Clinical Professor of Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania, etc. Philadelphia and London: F. A. Davis, Publisher. 1891. Demi 8vo. Pp. 166. Cloth. \$1.25 net. (From Publisher.)

This No. 10, in the "Physicians' and Students' Ready Reference Series," is the "Essay to which was awarded the Boylston Prize of Harvard University, July, 1890." Contrary to the implication of the title, very little is said about the pathology of fever. "Suffice it to state that the profession are almost universally of the opinion that fever is a disorder of calorification, depending upon nervous action, said nervous action being the result of various causes," is about all said on the pathology of fever in itself. The author then devotes his essay to the critical studies of antipyrin, antifebrin, thallin, phenacetine, salicylic acid and its compounds, and cold bathing. And then, in his conclusions, says antipyrin stands foremost as the antipyretic, with antifebrin next, phenacetine next, thallin last. As analgesics, antipyrin leads; phenacetine is as useful as antifebrin, and safer, while thallin possesses hardly any such power. Salicylates act better in rheumatism than any of the antipyretics in the relief of pain and cure of the disease; but the others control the fever more effectively. For widespread application in the hands of the inexperienced, cold sponging is the antipyretic *par excellence*. Discretion should always guide in the selection and use of antipyretics.

Practical Notes on Urinary Analysis. By WM. B. CANFIELD, A. M., M. D., Lecturer on Clinical Medicine, University of Maryland. 1891. George S. Davis, Detroit, Mich. 12mo. Pp. 93. Paper, 25 cents.

This selection of author and subject for one of the "Physician's 'Leisure Library'" was excellent. Dr. Canfield writes from the practical standpoint, and makes plain, in a few words, what it takes many authors a volume to say.

Wood's Medical and Surgical Monographs. June, 1891. Published Monthly. \$10 a year. Single copy, \$1. New York. Wm. Wood & Co.

Each three month's publications compose a volume. This June number completes Vol. X. Hence it contains title page, index, etc. The monographs of the present number are: "Influenza Associated with Nervous and Mental Diseases," by Dr. Van De Venter—pages 15; "Technique of Ling's System of Manual Treatment as Applicable to Surgery and Medicine," by Arvid Kellgren, M. D.,—pages 144; "Antipyresis," by Dr. Arnaldo Cantani, Naples—pages 20; "Some Urinary Disorders connected with the Bladder, Prostate and Urethra, by Reginald Harrison, F. R. C. S.,—pages 57.

Editorial.

Doctors Should be in Legislatures.

It speaks very poorly for the estimate placed upon the value of education by those writers in some of the country papers of this and other States who want to do away with Boards of Medical Examiners now established, or who would deprive such Boards of one particle of the power they possess. Some of these writers are even bold enough to advertise their personal ignorance by signing their own names to the clap-trap, communistic articles they publish. Some of such articles or communications to country papers as we have seen furnish only another evidence of the fact that it is unfortunate that there are no restrictions upon the voting rights of individuals who show absolute ignorance of the measures in hand to accomplish that which ordinary information shows to be needed and that common sense dictates to be right.

But when we remember that such writers are voters, frequently possessed of some legislative ambition, and, hence, in a demagoguish way, are retailing their ignorance from cross-road political stumps to crowds, most of whom are even more ignorant than they of progress in letters and science, it becomes self-evident that the composition of a State Legislature may be such as to undo that which is good, debase science again to the level of trickery, and turn a loose once more upon the community scores and hundreds of persons, dubbed doctors, who are simply able to hide their ignorance

from the people either by the misuse of technicalities that the non-professional are presumed to be unable to repeat or to understand, or else are able to retain position in professional bodies only by the exercise of that peculiar form of silence known the world over as "*fool's wisdom*." It becomes, then, a matter of importance to know something of those who are, in reality, to become legislators—it matters not to which of the great political parties they belong. And with reference to the interests of the medical profession, in its laudable relationships to the people at large of a Commonwealth, it is a most important matter that there should be in each branch of a Legislature at least two or three practitioners of recognized ability in their profession, and of information enough about the medical interests of their States to properly represent the need of and growing demand for education among doctors. We trust that this suggestion will stimulate some accredited representatives of the profession to come forward at once, and offer themselves before their people as candidates for the coming winter's Legislatures.

Among matters of professional interest in Virginia, for example, we may mention that we have had a State Board of Health for many years; but it is totally inoperative because no appropriation has ever been made to pay its expenses. Nor does the State law allow compensation for expert testimony, although a physician can be taken from Norfolk to Abingdon, or from Danville to Alexandria, and kept there indefinitely to give expert testimony while he is paid only fifty cents a day. A physician must assume the responsibility of committing patients to asylums, while he is paid only the pitiable sum of a dollar or two. The poor of the State are, for the most part, absolutely dependent upon the charity services of the physician—and his charity cases are always *very* numerous, oftentimes forming the major part of his rounds of practice; and yet, in this State, he has to pay \$25 license tax per annum.

These are only some of the matters that peremptorily call for the services in the Virginia Legislature of some well-informed representative *practitioner* of medicine.

In expressing the earnest hope that, here and there, from the country districts at least, some doctors of recognized representative standing may consent to become legislators this winter, it may encourage some to do so by reminding them that the Legislatures of the Southern States all meet in the dead of winter, when many a time the doctor is com-

pulsorily housed by the inclemency of the weather, the impassable condition of the country roads, and the impossibility during these months, in sparsely settled sections, where patients are remote, of making even an ordinary laborer's day's wages. The Legislatures adjourn—even in advance of the breaking up of winter seasons—in plenty of time for the legislative physician to return home and get affairs in order so as to enter actively upon professional work as soon as the weather and roads will allow him to resume active and pecuniarily sustaining rounds of practice. While in the Legislatures that are held in the cities, there are continuous opportunities for the medical legislator to improve himself professionally by daily association with physicians and surgeons of renown throughout their States, by attendance on the weekly or bi-weekly meetings of the local Medical Societies, etc. Furthermore, in special cases demanding his professional attention at home, he can secure leaves of absence from the Legislature sufficiently often to attend to them. As to the item of expense during the winter season at home, he cannot do more usually than clear household expenses. A legislator's salary is generally enough to meet that amount. So that, after all, the representative medical country legislator would not have to make so much of a personal sacrifice to serve his State and his profession in the manner intimated as might, on first mention, be suggested to him. Will not this appeal persuade some representative *practitioners* to consent at once to become candidates for the coming winter's Legislatures?

Dr. John B. Hamilton

Has resigned the position of Surgeon-General U. S. Marine Hospital Service, which he has been so excellently filling for years, to accept the Professorship of the Principles of Surgery and Surgical Pathology in Rush Medical College of Chicago, Ill. Genial in disposition, fluent in speech, systematic in study, progressive in plan and work, with due respect to the opinions of others, learned in medical and surgical science, and skillful in operation, his selection to fill so important a professional trust was far-sighted, and gives to Rush Medical College even a higher rank than it has heretofore enjoyed in the esteem of the profession. President Harrison, in recognition of his valuable services to the country and government, has appointed Dr. Hamilton to the rank of Surgeon, U. S. M. Hospital Service, which he will retain, we suppose, throughout life.

Kentucky's Ruling as to Who May Practice Medicine in that State.

If Kentucky did not succeed in securing a law equal to that of Virginia and North Carolina, its State Board of Health has availed itself of its powers to define what College diplomas shall not be recognized as sufficient evidence of qualification to practice medicine and surgery within that Commonwealth. It will be seen that this ruling of the Kentucky Board will prevent graduates of several of the popular Colleges of this country from securing licenses after 1892. Other States are doing likewise. In a word, the great benefit to the profession at large of the decided stand taken some years ago by the Virginia and the North Carolina State Boards of Medical Examiners, has so conclusively proven the need of a general demand for a higher standard of medical education than formerly prevailed, that now all the States, one by one, are establishing requirements of their own, which compel the Colleges hereafter to take advanced steps.

The following self-explanatory resolution was adopted at the recent meeting of the State Board of Health of Kentucky, held in Louisville:

"Resolved, That the Secretary be instructed to place upon the list of Medical Colleges whose diplomas are to be certified and endorsed for registration under the laws of this State, only such Colleges as shall, after the session of 1891-'92, exact of matriculates and graduates a minimum of requirements not less than those required by the American Medical College Association."

Dr. J. N. McCormack, of Bowling Green, Ky., is Secretary of this Board, to whom all further inquiries regarding the Kentucky law should be addressed.

Dr. Walter Wayman, Surgeon-General U. S. Marine Hospital Service.

Surgeon Wayman, who has for some time served as Chief Assistant under Dr. John B. Hamilton, has been appointed (about June 1st) by President Harrison to fill the position of Surgeon-General U. S. Marine Hospital Service, made vacant by the resignation of Dr. Hamilton. Trained by years of active service in the Marine Hospital Service, and more recently as Chief Assistant to the Surgeon-General, he comes into full rank as an experienced officer, familiar with the customs and duties of the high position to which he has been called.

Bicycles as Vehicles for Doctors, etc.

The day for the mere novelty of the bicycle is over. Its uses are being everywhere considered and extended. In many sections North and West, it is fast becoming a popular vehicle for the physician in making his daily rounds. Where the smoothness of streets or roads permits of its use by any one, to whom can it be more serviceable than the physician? It is easily made to gain ground on the usual speed of the horse and buggy in city travel. It is practically noiseless in motion, thus disturbing no one. It requires but little practice for one to become an easy rider. Unlike the horse and buggy, it does not break bridles when fire bells ring, or when engines or bands of music pass by. It is not liable to the smash-ups of runaways. Its cost, with all necessary equipments, is about the same as that of a common-stock buggy horse, without his harness and buggy. The annual cost of keeping a good "safety bicycle," is practically nothing, for it can be housed in the doctor's office; whereas the horse and buggy require a stable, a hostler, beside the expenses of horse-feed, shoeing, harness repairs, etc.,—an annual expense of over \$200. When called out at night, if the doctor has his bicycle, there is no delay and confusion about hitching up; his conveyance is ready when he is ready. Indeed, many other considerations suggest the propriety of doctors generally adopting the use of bicycles—especially the younger class of doctors. Why should not Southern doctors be as quick to appropriate a useful idea as those of our Northern and Western cities? We feel that we are doing a real service to many of our doctor friends in thus calling their special attention to the "Hartford Safeties"—the best medium-price safety bicycle made—advertised on page 9 of this journal. They must soon become commonly used conveyances for doctors.

Dr. R. M. Slaughter, of Theological Seminary, Va.,

Whose special studies for years past have been in the direction of medical and pathological chemistry, microscopy, etc., announces, in the advertisement department, that he will devote special attention to the chemical and microscopical examinations of secretions, pathological specimens, etc. The day has come when such special laboratory work is essential to the aid of the practitioner, and we take great pleasure in assuring our readers that Dr. Slaughter is well qualified and equipped to render such services as he mentions.

The Atmospheric Tractor,

Introduced last year by Dr. Peter McCahey, of Philadelphia, has been so improved as scarcely to be recognized as the same instrument. It now consists of a rubber cup, a tube, and an air-pump. These are first to be joined together; the rubber cup is then to be applied on the presenting portion of the vertex, after the cervix uteri has become sufficiently dilated, and then by means of the air-pump or exhaust syringe all the air is to be drawn out of the rubber cup or bell, which thereby becomes firmly attached to the scalp of the vertex, and then traction is to be exercised during pains. This traction (on the same principle that boys apply leather "suckers" to rocks, etc., for their amusement) can be made sufficient to pull 30 pounds or more without risk of injury to child or mother. See advertisement on page facing second cover page, which has been changed to suit the present improved instrument. Price, \$3. The new tractor has been used by a number of practitioners in Philadelphia, etc., with satisfaction.

The Long Island College Hospital Catalogue,

Just issued, shows that the medical class of the session ended in April, numbered 250 students, and had a graduating class of 82. As indicative of the special clinical advantages of this *College Hospital*, 20,830 patients were under treatment in the hospital and dispensary during the year 1890. Dr. Joshua M. Van Cott has been appointed Professor of Histology and Pathological Anatomy, *vice* Dr. Frank Ferguson resigned. The important announcement is made that hereafter the regular course of lectures will cover a session of six months, and that three full courses will be required for graduation. The Long Island College Hospital and Hoagland Laboratory we regard as one of the most advanced and ably-conducted institutions in this country. Dr. J. H. Raymond, Brooklyn, N. Y., is Secretary of the Faculty, to whom applications may be made for catalogue.

Mr. A. H. Robins, Pharmacist, etc.,

Has moved his prescription and family drug store to his new and well equipped store, No. 200 East Marshall street, Richmond, Va., where he has increased his stock so as to be able to furnish everything required for the sick. In fact, we have no retail druggist who has a larger assortment of pure drugs. His prices have always been based on the principle of "moderate profits and quick sales." It will pay to go to his store to buy what you want in his line.

The American Society of Microscopists

Will hold its Fourteenth Annual Meeting in Washington, D. C., August 10th, and continue in session five days. Its membership numbers about 350—embracing most parties at all prominent as microscopists in the United States. Applicants for membership must be socially respectable and interested in the use of the microscope. In the "working sessions," experts give demonstrations of the details of their lines of work; in the informal evening "conversaciones," the room of every worker having anything special to exhibit or demonstrate is open to all who wish to witness the demonstration. Applicants for membership should remit \$3 to cover initiation and one year's dues—\$2 each year—to the Secretary, Dr. W. H. Seaman, 1427 Eleventh Street, Washington, D. C. Dr. Frank L. Lewis, of St. Louis, is President this year; Dr. C. C. Mellor, 77 Fifth Ave., Pittsburgh, Pa., is Treasurer. The Society annually publishes its Proceedings, which are elegantly and profusely illustrated with photo-engravings, autotypes, chromoliths, and wood cuts, in the highest style of art. The volumes are well indexed.

Dr. J. Harris Pierpont, of Pensacola, Fla.,

Who was elected First Vice-President of the Florida State Medical Association during its Annual Meeting in April, becomes now the President of that Association because of the death of the President-elect, Dr. Thos. P. Gary, of Ocala. Dr. Pierpont, who went from Virginia after graduation in medicine a few years ago, has attained an enviable position in the esteem of the profession of his adopted State, and is possessed of the energy and push essential to develop his State Association into one of high rank among those of the nation, if its members will lend him the support of their influence and work in their respective sections.

Lithograph of Uterus and Appendages.

We wish to thank the Dios Chemical Company, of St. Louis, Mo., for the constantly useful lithograph of the uterus and appendages, showing the relation of parts, etc. And we take pleasure in adding the statement that a copy will be furnished *free* to each of our subscribers if they will simply make application to the Dios Chemical Co. for it. While they do not suggest that we should do so, it is plain that each applicant should send a two cent postage stamp to cover mail expenses.

Inter-Continental American Medical Congress.

By resolution adopted during the recent session of the American Medical Association, one member from each State, Territory, and one each from the U. S. Army, Navy, and Marine Hospital Service, were appointed a Committee to effect a permanent organization of this Congress, to be composed of the medical profession of the Western Hemisphere. The Committee organized in Washington, D. C., May 7th, by the election of Drs. Chas. A. L. Reed, of Cincinnati, *Chairman*; J. W. Carhart, of Lampassas, Texas, *Secretary*; and I. N. Love, of St. Louis, Mo., *Treasurer*. An adjourned meeting of the Committee will be held at St. Louis, October 14th, to adopt Constitution, etc., to elect permanent officers, and to decide the time and place of meeting of the Congress. The Committee has issued a preliminary circular, which will be sent to any one interested by addressing either one of the three officers above named.

A Good Thing for Enterprising Physicians.

Physicians, both North and South, are thoroughly aroused to the necessity of having their offices properly equipped with the most practical appliances. The enterprising firm of Roberts & Allison, of Indianapolis, Ind., manufacturers of the celebrated R. & A. Chair, which has had such an enormous sale, have recently put on the market a Surgical Table, the mechanism of which is similar to that of the chair. It can be adjusted to any of the positions attainable on the chair, and is said to be the most perfectly constructed and most convenient table ever put on the market. Their recent exhibits at the National and State Associations have given the profession a better opportunity to become acquainted with the merits of their chairs and tables, and the excellent quality of work turned out by them. They are courteous, reliable gentlemen, attentive to business, and richly merit the liberal patronage they have received.

Physicians May Ride on Freight Trains in Ohio.

A recently enacted law in Ohio says: "Physicians in the discharge of professional duties shall be permitted to ride, at their own risk, upon freight trains between stations where such trains stop, paying therefor the regular passenger fare." Such a law would be useful in every State, as physicians often lose much valuable time waiting for a passenger train when a freight train could be just as well utilized.

The Toner Library at Johnstown, Pa.

The large and valuable medical and literary library, of some 5,000 titles, collected by Dr. Jos. M. Toner, of Washington, D. C., was given to the Cambria County [Pa.] Medical Society soon after the "flood" there in 1889. Dr. Toner's boyhood was spent in Johnstown, and it was there that he began the reading of medicine under the direction of the venerable Dr. John Lowman. "The Toner Library" contains many volumes that cannot be duplicated.

The D. Appleton & Co. Prize,

Which is annually awarded to the one who stands the best examination before the Medical Examining Board of the State of North Carolina, was this year awarded to Mr. Russell Bellamy, of Wilmington, N. C., an under-graduate student of the University of the City of New York. He received the highest general average of marks during the regular session of the Board in Asheville, during May, 1891.

Donation of \$100,000 to Medical Department of Tulane University.

Mrs. Dr. T. G. Richardson has given \$100,000 for the erection of a new College building in connection with the Medical Department of Tulane University of New Orleans. This is the most munificent donation ever made by a Southern lady to any medical interest in the South. It will be remembered that it is to her husband's connection with the Medical Faculty, for the past twenty or twenty-five years, that a great deal of the renown of the Medical Department is due.

The Maltine Co., Electrotpe Advertisement

Represents a Maltese cross, emblematical of the success of merit, of practical benefit to mankind, and of ability to resist attack. The appropriateness for the use of this device in the advertisement of the manufactures of the Maltine Company is apparent when the perfection of their goods and their practical benefit to mankind are taken into consideration.

Read the Advertisements of Colleges and Health Resorts in this number, after reading matter.

Dr. Francis Peyre Porcher, of Charleston, S. C.,

Has just had the long-merited title of LL. D., conferred upon him by one of the colleges of his State. It surely must have been an accidental oversight that he did not receive it before this; for there is none in the Southern profession who more richly deserved it.

Obituary Record.

Dr. Thos. P. Gary

Died at his home in Ocala, Fla., June 10th. He was one of the most prominent in the profession of his State, and his unexpected death at this time is felt to be a heavy loss. During May, he started from home to attend the American Medical Association in Washington, as also the Association of Railroad Surgeons in Buffalo, and got as far as Atlanta; but, on account of an attack of bronchitis following *grippe*, had to return to his home, and apparently improved in health for some week or more afterwards. In 1890, he was elected President of the Florida Medical Association, and so faithfully did he discharge the duties of his office that, even against his personal wish, he was re-elected President for the current term, beginning April, 1891. The Pensacola Medical Society, in special session on June 12th, passed resolutions as tributes of respect to his memory and published them in circular form for distribution to friends and to members of the Florida State Medical Association.

Dr. Fordyce Barker

Died at his home in New York city, from apoplexy, May 30th, 1891; age 73 years. His record of glorious achievements in medicine is engraved upon the memories of every practitioner. In the cluster of names of the great men who established gynæcology about the middle of this century, Dr. Barker's name stands prominently in the list of those who were second only to the immortalized Dr. J. Marion Sims. His discoveries and inventions in the line of treatment of diseases of women, etc., have been numerous, and his text-book will long remain an authority to which the student of years to come will turn for instruction and guidance. His loss will indeed be felt as irreparable for time to come. The profession of the world mourn his death.

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Original Communications.

ART. I.—Condensed Lectures on Bright's Disease.

By ROBERT T. EDES, M. D., Washington, D. C.,

PROFESSOR OF CLINICAL MEDICINE AND LECTURER ON DISEASES OF THE KIDNEYS IN
GEORGETOWN UNIVERSITY, ETC.

The name Bright's disease covers a ground of very varying extent, according to the person who uses it.

In the sense of being the disease described by Dr. Bright (and any one who wishes to understand it cannot do better than begin with his works), it includes the various forms of diffuse or general nephritis, both acute and chronic. Modern writers try to exclude one or another form, and speak of that which they wish to retain, not always agreeing in their choice, as "true" Bright's.

Much confusion has arisen in this way, and it is better to retain the name for application to the whole group or family, and then to particularize, as much as one sees fit, by more definite anatomical terms. But to consider every disease of, or around, the kidneys as "Bright's," is entirely erroneous, as is also the use of the word synonymously with "albuminuria."

I have seen a case reported as "Cure of Bright's disease by operation," where an abscess, apparently perinephritic, was successfully treated by incision and drainage. Such a heading might lead an ignorant patient to desire, or an enthusiastic but ill-informed surgeon to perform an entirely futile operation on an unsuitable case.

There have been many attempts made to re-arrange Bright's original grouping into others, for it was very evident that he had included either different stages or different forms under one head.

The extreme in one direction is marked by Rayer's seven forms. The present tendency is to fuse them together again.

The classification which seems to me the simplest, and at the same time to bring best into harmony anatomy and clinical observation, is as follows:

Cut off *acute nephritis*, which may begin as glomerular or epithelial, but which, when severe, generally includes both. This is largely of toxic origin, the poison being very frequently that of scarlatina, sometimes of diphtheria and other infectious diseases, irritant drugs like cantharides and turpentine; and sometimes more obscure, as in exposure to cold and wet, causing acute dropsy.

At the other end, cut off the *amyloid* or *waxy degeneration*, which is only a part of a general disease, and in fact rarely occurs as the sole lesion even of the kidney. It is not probable that a patient ever dies of amyloid renal disease, pure and simple.

The remaining cases may be arranged in a series. At one end, we have *parenchymatous nephritis*, with degeneration of the epithelium of the renal tubes. This form is the more nearly allied to the acute.

The kidney is at first the "large white," but at a later stage may atrophy and become withered and cirrhotic, closely resembling that which results from another process. For convenience, we may call it the "small white."

Parenchymatous nephritis of the acute kind is allied to acute "fatty degeneration;" and the name which one would apply

to a phosphorus or arsenic kidney, for instance, would depend upon his views as to the nature and scope of the inflammatory process. A certain amount of fatty degeneration is hardly pathological in some animals—pigs, for instance.

At the other end of the series we have *interstitial nephritis*, beginning in the stroma or interstitial tissue, but involving blood vessels, and finally epithelium, and going on to atrophy. This final stage is the "small red," "contracted," "cirrhotic," "gouty" kidney. In the earliest stages, the kidney is not smaller than normal, but has an increased deposit of new connective tissue which, later, contracts like that of a cicatrix or a cirrhotic liver. The cortical substance is atrophied, and cysts are very frequently developed from closure of the tubes.

We often meet with nearly pure cases of both forms—pure, that is, as regards their origin and early development; but we also have them mixed in all proportions, and complicated by acute processes and the amyloid degeneration.

Both of these forms may have a local origin—the first in toxic influences of substances passing through the kidney, or having a degenerating effect upon its cells. The list is not exactly the same as for the acute form, however, as we must take out the infectious diseases and insert alcohol. Exposure to wet and cold is among the most fruitful causes.

A morbid form of the blood albumen has been regarded as the earliest change in this disease, " (heter-albumin) " but this is very far from being satisfactorily proven.

Interstitial nephritis may also be a secondary result from local mechanical irritation, as from a large renal calculus, in hydronephrosis, or from the backing up of urine from obstruction of the lower passages.

These cases are, to be sure, not "Bright's" at all, in the narrowest sense, but the pathological changes in the secreting structure of the kidney are similar or identical. The poisons of lead and of gout give rise to this form, probably by their action on the arteries as well as on the kidneys.

The etiology, however, in many cases, is very obscure.

Cases of well-marked and uncomplicated interstitial nephritis have been, in the experience of the writer, especially frequent among the class of hard-working, driving, anxious business men, not of bad habits in the ordinary use of that phrase, but men who paid little attention to their health—men whose system was in a continuous condition of strain, so that one might almost use the word “tension” literally, and suppose it transferred from the mind to the arteries.

There is a species of renal atrophy in the aged which does not necessarily lead to serious results, inasmuch as it progresses so slowly that it only keeps pace with the diminished demands made upon the organs by the enfeebled nutrition of old age.

The most important fact, however, and that which makes it most desirable to draw the distinguishing line between the two forms—not for the first time in the dead-room, but at the bedside—is that interstitial nephritis, except as a result of some local mechanical irritant—*i. e.*, in the vast majority of cases—is a part of a general disease, involving the arteries more or less extensively over the body, and frequently producing hypertrophy of the heart.

The nature of the connection between nephritis and hypertrophy of the heart (the fact itself having been noted and commented on by Bright) is obscure, and has been the subject of much study, clinical and experimental, but without thoroughly satisfactory results.

In the great majority of cases where the two conditions co-exist, there is disease (atheroma) not only of the small, but of the large arteries. Disease of the smaller arteries (arterio-capillary fibrosis) has been supposed to be the connecting link by its resistance to the passage of the blood, consequent rise of blood pressure in the main arteries, and development of the heart muscle in the endeavor to overcome the increased resistance. This permanent increase of tension is perceptible to the educated finger, and demonstrable by the sphygmograph. It is, however, a great mistake to suppose that all cases with a relatively high tension—*i. e.*,

slow escape of the blood through the smaller arteries—are on their way to, or have reached Bright's disease.

In some cases the hypertrophy of the heart succeeds an interstitial nephritis of purely local origin. (See *Philadelphia Medical News*, August 10th, 1889.) But whatever the connection, the fact that severe symptoms on the part of the arterial, respiratory and nervous systems may be prominent in a case which either at the time includes, or later develops an interstitial nephritis, long before the strictly renal symptoms become manifest, is a highly important one. So important has it seemed to some, that the late Dr. Mahomed, who did much excellent work in this direction, used to speak of "deaths from Bright's disease without nephritis"—a very questionable piece of nomenclature, but a phrase which serves to emphasize clinical facts of the highest significance.

Typical cases of either form of chronic nephritis are to be distinguished clinically as well as anatomically; but there are some which unite more or less of the symptoms as well as the lesions of the two affections. It would be strange were it otherwise. It could hardly be expected that changes in the secretory surface could continue for months or years without producing irritation and inflammation in the subjacent connective tissue; and, on the other hand, it is manifestly impossible for hypertrophy of the connective stroma, followed by its shrinking, to take place without gradual destruction of the parenchymatous portion of the organ. The first process is paralleled by the thickening of mucous membranes in chronic catarrh of the respiratory passages, fibroid phthisis, etc., and the second in the atrophy of the cirrhotic liver.

Chronic Bright's disease, is not often a sequel of the acute.

The diagnosis of advanced cases is extremely easy. A large amount of albumen, large numbers of casts—epithelial, granular, fatty, and waxy—are conclusive as to the existence of parenchymatous nephritis, either primarily of this character, or as a late stage of the cirrhotic form. They are usually coincident with dropsy, either as general or partial

anasarca, hydrothorax, or, the most dangerous complication of all, œdema of the lung. Nervous symptoms—headache, vomiting, convulsions and coma—may occur in either form.

The early diagnosis, on the other hand, is often beset with difficulties, especially in interstitial nephritis.

Albumen may be present in small quantities, as it may also in other diseases, and under certain circumstances in apparent health. The same is true of a very few, small, transparent casts.

These conditions may be found in some cases of local irritation from a highly concentrated acid urine, as in the uric acid diathesis, or in jaundice, without indicating any decided or permanent nephritis.

The old fashioned *tests for albumen*, if *carefully used*, are practically the best; *i. e.*, boiling the acidulated, and if necessary, filtered urine, comparing it with an unboiled specimen, allowing it to stand and cool, and inspecting the precipitate; and nitric acid, by the overlying or underlying method—not by mixing.

Quantities of albumen detectable by these methods are not to be neglected, especially in persons beyond their youth. They may occur without other symptoms, but their presence should be a signal for further investigation.

There are tests which will show the presence of a trace of albumen in a majority, often a large majority of healthy adults under certain circumstances (cold, severe and long continued exercise, mental strain, full meal, etc.) But there is no object in using a test which can teach the physician nothing, and can only frighten the patient.

It is said that albumen and casts are frequently absent in Bright's disease. It is the belief of the writer, that this source of error is much less important, when care is used, than has been represented.

The *quantity of urine* is of the highest importance. It should be measured and not estimated. A constant increase, say to two and a half or three liters, in the quantity of light colored urine of low specific gravity, is very suspicious, and may be diagnostic.

Frequent micturition at night is also suspicious; but taken by itself, proves nothing. Scanty, high-colored urine should excite suspicion, but may be caused by so many different conditions—notably fever, and passive congestion of the kidneys—that, by itself, it has little meaning.

A diminution in the quantity of urea excreted in the twenty-four hours, has been claimed as an early sign of Bright's.

In many cases the urine is, as has been stated, increased rather than diminished. Urea is an extremely diffusible substance passing out with great ease, and the kidneys in such cases are abundantly able to take care of all the urea formed. Hence a diminution of urea excreted means a diminution of urea formed; and its formation is not the special work of the kidneys, but of the entire organism—very largely of the liver. It is in some cases of liver disease that the excretion of urea has touched its lowest mark. So that a diminished amount of urea in the urine, careful attention being paid at the same time to the amount of nitrogenous ingesta, may mean general ill health, but not any obstacle to secretion. By the time sufficient inroads have been made upon the structure of the kidneys to prevent their carrying off all the urea, the diagnosis will have been made long before on other grounds.

The condition of the heart and arteries is of great significance.

An hypertrophied heart, with hard, tense, prolonged pulse, is exceedingly likely to be connected with interstitial nephritis. It may precede more decisive symptoms.

A cerebral hæmorrhage, especially a large one in a person of middle age or below, is likely to be connected with the symptoms just mentioned, and consequently, with interstitial nephritis.

Severe and persistent headaches, without symptoms of localized cerebral disease, and severe and persistent vomiting without organic disease of the stomach, should excite suspicion and lead to careful, and, if necessary, repeated examinations of the urine.

Failure of vision is not infrequently the first symptom which leads a patient to seek medical advice. The ophthalmologist finds a peculiar neuro-retinitis; and examination reveals albumen and casts. Sudden blindness (amaurosis) may be the immediate precursor of uræmic convulsions.

Pain in the back has no value whatever in the diagnosis of chronic Bright's. It may, and is likely to, be present in pyelo-nephritis and in acute Bright's.

Questions of Diagnosis which May Arise.

Which form of Bright's is this, or which is the controlling lesion?

URINE IN	PARENCHYMATOUS. NEPHRITIS.	INTERSTITIAL NEPHRITIS.
Quantity,	Diminished.	Increased.
Sp. gravity,	Increased or normal.	Diminished (1005 to 1010).
Color,	High, or dirty greenish yellow.	Pale yellow, clear.
Casts,	Abundant, fatty, degenerated.	Few, hyaline, or (later) degenerated.
Dropsy,	Usually much.	Slight, or (later) abundant.
Dyspnœa,	From hydrothorax or œdema of lung.	From œdema of lung or nervous. (Cheyne-Stokes.)
HEART,	May be somewhat hypertrophied.	Much hypertrophied.
Impulse,	Weak or normal.	Increased, heaving.
Pulse,	Feeble or natural.	Hard, firm, incompressible.
Sounds,	Weak or normal.	Ringing. Bruit de galop.
NERVOUS	Coma, convulsions, amaurosis, headache.	Headache, hemiplegia, convulsions, coma.
SYMPTOMS,		
Neuro-retinitis,	Rare.	Common.

In a case with enlarged and strongly-acting heart, with œdema, and the urine containing casts and albumen, is it Bright's with hypertrophy, or valvular disease with congestion of kidneys?

	VALVULAR DISEASE.	PARENCHYMATOUS NEPHRITIS.	INTERSTITIAL NEPHRITIS.
URINE,	Scanty.	Scanty.	Abundant.
Color,	High.	Not so high.	Pale.
Deposit,	Urates.	Many epithelial and fatty casts.	Slight, few hyaline casts.
Albumen,	Small amount.	Much.	Small amount.
HEART,	Souffles, etc.	No souffles.	No souffle, bruit de galop.
ARTERIES,	Low tension, irregular pulse, etc.	Low tension.	High tension.

Diagnosis of a case of severe frequent headaches, abundant urine, little albumen, few or no casts for a time.

	ORGANIC DISEASE OF BRAIN.	SICK HEADACHE.	BRIGHT'S DISEASE.
Pain,	Localized.	Not so closely localized.	Not so closely localized.
Paralyses,	Localized, eye muscles.	None.	None, unless sudden hemiplegia.
Urine,	Constantly profuse.	Normal in intervals.	Constantly profuse
History,	Syphilis? tubercle? injury?	Previous nervous affections.	Gradual deterioration of health.
Eye-ground,	Double optic neuritis, optic atrophy.	Normal.	Albuminuric neuro-retinitis.

In a case with rapid œdema, scanty urine, albumen and casts, is it an acute case of Bright's disease, or an exacerbation of an essentially chronic case?

	CHRONIC, WITH EXACERBATION.	ACUTE NEPHRITIS.
Urinary Sediment,	Waxy casts. Very large dark casts of epithelium.	Hyaline and epithelial casts, blood corpuscles.
Heart,	Hypertrophied (if case is of interstitial nephritis).	Normal.
History,	Headaches, vomiting, slight dropsy, palpitation, gradual anæmia.	Health previously good.

Abundant pale urine, small amount of albumen and casts, small amount of pus? Is it hydro-nephrosis from obstruction, or Bright's disease with slight inflammation of the urinary passages? Or, in other words, is the secretory substance of the kidneys primarily and seriously affected, or only secondarily to some local inflammatory lesion?

	HYDRO-NEPHROSIS, ETC.	BRIGHT'S WITH SLIGHT CYSTITIS, ETC.
Urine,	Does not settle clear. Remains opalescent (<i>polyuric trouble</i>).	Settles clear, with small deposit of pus.
Deposit,	Pelvic epithelium, pus.	Hyaline casts, pus.
Heart,	Feeble.	Hypertrophied.
Surgical Examination,	Enlargement of prostate, etc.	Negative.

A man, possibly insurable, has a small amount of albumen (detectable by the ordinary tests). Shall he be insured?

Never on the strength of a single examination.

	YES.	NO.
Age,	Adolescent.	Past middle age.
Time of occurrence,	After special exposure or with regular intermissions.	Constant. (There are exceptions to this.)
Casts,	<i>Very few</i> hyaline at times.	Constant and abundant.
Arteries,	Moderate tension. elastic.	High tension, atheromatous.
General Appearance,	Blooming, healthy.	Pale, sodden.

The prognosis of acute nephritis is in a general way favorable. It is, like other acute inflammations, self-limited, tending to recovery, seldom running into the chronic form. Severe cases may terminate fatally by œdema of the lungs, or more frequently by uræmia.

In well-developed interstitial nephritis, the prognosis, as regards ultimate recovery, is as nearly hopeless as anything can be. It is, however, exceedingly chronic. After it is well recognized, a man may go on attending to his business for some years, and after that live some years as an invalid. More frequently, however, it is not diagnosticated until toward the end, the patient for a long time complaining only of general ill health, and seeking medical advice only when the most pronounced symptoms make their appearance.

Well-marked chronic parenchymatous nephritis has almost as unfavorable an outlook as regards ultimate recovery, and perhaps more so as regards the duration of life.

It must be remembered, however, that there are cases *somewhat subacute* in their character, where the tendency to unfavorable progress may be checked, and which admit of complete or nearly complete recovery.

In parenchymatous nephritis, we often meet with many alternations of better and worse. Where the patient's circumstances permit, advantage may be taken of care and climate to prevent the recrudescence. With hospital patients, however, a discharge from the hospital, after great improvement or cessation of the symptoms under treatment, is apt to be the starting-point, sooner or later, of a new exacerbation.

A large part of the alleged cures of chronic Bright's disease are either instances of absolutely wrong diagnosis, of non-recognition of acute or sub-acute cases, or of mistaking temporary improvement for a cure.

URÆMIA.—The toxic properties of the urine do not reside exclusively or even chiefly in the urea or products of its decomposition. Urea in the blood, except in an exceedingly large percentage, such as has seldom been observed, is nearly harmless, and is moreover so diffusible that it is eas-

ily gotten rid of, so long as water is flowing through the kidneys. The saline constituents contribute largely to its toxicity.

It is highly probable that other less known substances—possibly, but not necessarily, ptomaines—are the most important of all. It is possible that these substances may accumulate in the blood more easily than the urea, salts, etc.; so that there may be a failure of their elimination at a period of the disease when the urine is sufficiently abundant, and contains a sufficient percentage of solids to account for all that are known to be formed. It is also possible that they may be formed more largely or even exclusively in Bright's disease. This speculation is based upon the fact that uro-toxic phenomena appear in Bright's disease more rapidly and after a much less complete interference with elimination than takes place in some cases of mechanical suppression. In these latter cases (obstruction of ureters by stones, or valves, or removal of an only kidney), where the suppression may be absolute, the symptoms are delayed many days, and are not usually of so violent a character (convulsions).

It would appear that the excrementitious material formed and retained in Bright's disease is of a more poisonous character than that retained when the processes of health are suddenly interrupted.

Many of the symptoms usually designated uræmic are not uro-toxic at all, but are dependent on anæmia, hydræmia, and especially on the affections of the heart and vessels going on in Bright's disease.

The theory of Traube, that uræmia was due to œdema of the brain, is now abandoned as an exclusive one, though it may apply in some cases, and especially where well marked local paralyses, evidently due to a focal lesion, recover with too great rapidity to be due to a hæmorrhage or an embolism, or, on the other hand, are found after death not to have been so caused.

Neuralgia, and other disturbances of sensation, and sometimes vomiting, may be purely neurotic. "Dead fingers,"

many cases of headache, dyspnœa, insomnia, dimness of vision, and polyuria, are symptoms depending either upon derangement of the proper innervation of the vessels (angio-neurotic), or their degeneration (angio-notheutic).

Some other cases of headache, often vomiting, dyspnœa (especially Cheyne-Stokes), delirium, muscular twitchings, convulsions, amaurosis, and coma, are truly uro-toxic.

Most puerperal convulsions are uro-toxic from a subacute parenchymatous nephritis. In some, however, the anæmic and angio-neurotic factors are of importance, and, in a few, the convulsions are really epileptic in character as well as in appearance, are provoked by the presence of pregnancy and parturition, and have nothing to do with renal disease.

THERAPEUTICS.—In *acute nephritis*, the tendency is to ultimate recovery; hence the therapeutic indications are to relieve symptoms until this can take place. Elimination may be promoted either cautiously through the kidneys themselves by the use of mild and non-irritating diuretics, of which the chiefest is water—distilled, indifferent, or mildly alkaline spring water. Irritating diuretics are sedulously to be avoided; and, if the amount of œdema is great, the amount of fluid ingested should be kept small. The fluid which is taken may well be the bearer of nutriment; hence a milk diet.

Elimination by the bowels is rapid and certain.

The skin is the organ chiefly sought to be stimulated. The two principal means are pilocarpine and the hot-air bath. Of these, the latter is less convenient but also less depressing. Pilocarpine, after an effectual dose or two, rapidly loses its effect. On the other hand, it has the great advantage of acting quickly and demanding no apparatus, or moving of the patient. It should be used with great caution if a patient is unconscious, on account of danger of suffocation from the accumulated saliva which the patient is unable to get rid of.

Convulsions may be controlled by chloroform, ether, or chloral. In puerperal convulsions, in addition, resort to rapid delivery, and sometimes to bleeding. Morphia may

be used with advantage subcutaneously. The writer has never ventured on the enormous doses recommended by some writers. Local abstraction of blood or counter-irritation over the loins is useful.

In the chronic forms, we have first to consider the progressive tendency to destruction of the kidney, either by primary degeneration of the epithelium or by its destruction under the contracting interstitial substance. In the first place, there should be avoidance of all the causes which would provoke the diseases—exposure to cold and wet being among the most important dangers; flannel should be worn; overwork, bodily and mental, given up. A climate free from both coldness and dampness should be sought if possible. As it seems highly probable, from many researches on the subject, that some of the symptoms are due, not to the simpler and more familiar products of nitrogenous decomposition, such as urea, but to the more complicated ones with which we are becoming acquainted, as ptomaines and toxic albumens, it is desirable that the nitrogenous foods should be presented in a form least likely to undergo abnormal changes. Hence, a heavy meat diet is not desirable. The amount of actual loss of albumen is, in most cases, not great, and it is not necessary to push animal food with a view to making up the deficiency. The vegetable proteids are capable of fully maintaining the nitrogenous equilibrium. More than this, it is not only not necessary, but throws increased and entirely avoidable labor on the kidneys, either as albumen or as excess of urea and uric acid.

The amount of meat should be regulated with reference to anæmia, and also to the digestion of the particular patient in question, but should never be excessive.

Milk is an excellent food and, in some cases, an exclusive, or almost exclusive milk diet can be employed, for a time with great advantage. Of course it cannot be prolonged indefinitely without additions and modification.

Tonics, especially iron, may be used. The preference is sometimes given to some of the ether-containing prepara-

tions, like the tincture of the chloride; but if any other form is more easily borne, the ether (say spirits of nitrous ether) can be added if necessary.

Water is of great importance. The value of a great number of spring waters, which have a reputation in such cases, depends mostly on the ingredient of which least is said—*i. e.*, on the water itself, and not on the trivial amount of sulphate of soda, carbonate of lime, or infinitesimal trace of lithia dissolved in it. If there is a tendency to excess of uric acid, an alkaline water should be selected.

In *interstitial nephritis*—the cirrhotic kidney—we have to consider not merely the state of the kidney, but the condition of the circulation which so frequently accompanies and precedes it.

A great deal of use has been made of the nitrites, especially nitro-glycerine, with a view to diminishing the arterial tension. It is very doubtful whether the slight and temporary diminution produced by the doses usually given could be expected to be of great value. Certainly the results have not seemed to give decisive proof of it.

The alterative metals—mercury, silver, and gold—have been used.

Bright was certainly right in warning against mercury. The constitutional action of this drug is exceedingly inimical to the renal epithelium. This need not prevent the administration of calomel as a cathartic if considered specially desirable.

Gold appears to the writer to be as futile in controlling the formation and contraction of new interstitial tissue in the kidneys as its sister, silver, has been found in similar conditions of the nervous centres.

Among the complications we find chiefly the symptoms which have already been spoken of under the head of acute nephritis. Œdema, however, being of longer duration and often more extreme, is likely to call for more decided treatment. This may be of the eliminative kind, remembering however that in this case it is water, and not especially the urinary solids, we wish to carry off. Hence, drugs requir-

ing the ingestion of much water should be discarded for those that may be given in small bulk, like the resinous cathartics.

Rest in bed often diminishes the œdema, but is much more likely simply to change its location. Mechanical relief, by tapping the great cavities, as in hydrothorax and as ascites, or the subcutaneous cellular tissue, is often called for. Punctures and incisions, if made with clean instruments, are not to be dreaded as causing local inflammation. They often drain for hours or days with advantage.

Edema of the lungs demands similar but prompt treatment, together with stimulation of the heart. The writer considers that, under these circumstances, the diffusible stimulants, alcohol, ether and ammonia, are of more value than digitalis. Some physicians consider musk and castoreum as valuable stimulants to the flabby and dilated heart. Bleeding may be useful, especially in terminal uræmia.

A word may be added as to the *use of morphine in the headaches* of interstitial nephritis. It is said by some persons that morphine should be given with great caution if there is any albumen in the urine; and the writer cordially subscribes to this sentiment, and is willing to add that it should never be given to anybody under any circumstances (except perfect familiarity with the patient and his idiosyncrasies) without great caution. This caution, however, should not be so great as to deprive such patients of the great relief which may be obtained by quite a small dose subcutaneously for the relief of intense headache. There are few circumstances under which it displays its powers more favorably than in these. Its use in convulsions was before spoken of.

Caffeine is often extremely useful.

Elixir of Three Chlorides (Renz & Henry).—Dr. X. B. Haynie, of Gallatin, Tenn., after frequent use of this preparation, says he finds it entirely reliable, and regards it as one of the happiest of combinations.

ART. II.—The Antagonism of Nitrite of Amyl, Trinitin, and Spiritus—Ætheris Nitrosi to Anæsthesia, and Like Conditions.

By THOMAS R. EVANS, M. D., of Lincoln, Va.

I had long since supposed that the antagonism of *nitrite of amyl* and chloroform had been settled beyond cavil; but from a paper by Dr. H. C. Wood on anæsthesia, read before a late International Medical Congress, this is not so. His experiments proved that the nitrite of amyl is of but little use as an antidote, and that digitalis is the most powerful of any.

But it would seem, from the limited experiments of Fothergill with digitalis versus aconite, that digitalis is much too slow to overtake the sometimes lightening-like effects of chloroform.

I am happy to see that some late comparative statistics are calculated to help restore chloroform again to favor in the North. All of us know that it is the most convenient and certain anæsthetic that has ever been employed; and possessing, as I submit, a chemico-physiological antidote in the nitrite of amyl, it is deprived of much of its horror.

Nitrite of amyl was discovered in 1844 by M. Balard, the same year in which the great and most beneficent prelude to anæsthesia was inaugurated by Dr. H. Wells taking up nitrous oxide gas.* But its introduction as an antidote to chloroform dates only from 1870, when Dr. F. A. Burrall, of New York city, most successfully used it. After its use, we can sometimes truthfully say to the restored, "As thy soul liveth, there was but one step between thee and death."

It is strange that, except historically, this life-reviving elixir has not received more attention.

* Such a statement should not go forth without a note reminding the reader that the late Dr. Crawford W. Long, of Athens, Ga., used sulphuric ether as a surgical anæsthetic in 1842, and a number of times prior to 1844, as pointed out in the historic article on this subject contributed to this journal by the late Dr. J. Marion Sims. Dr. Wilhite, of Anderson, S. C., is a living witness to the facts.—ED.

Fothergill, 1878, in his "*Antagonism of Medicines*," does not mention it.

Bartholow, 1881, "*On the Antagonism Between Medicines, Etc.*," does not mention it in this connection; but later, in his *Materia Medica*, he says that the cardiac failures caused by chloral, chloroform, and other heart-poisons, are often remarkably relieved by the nitrite of amyl.

Ott, 1878, "*Action of Medicines*," devotes but a few lines to it. "Dr. Wm. C. Dabney, of the University of Virginia, has proposed it as an antidote in chloroform poisoning." He further says that "when chloroform or ether produce dangerous symptoms, the inhalation of nitrite of amyl retards the anæmia superinduced by them."

In a late article, in the *Virginia Medical Monthly*, by Dr. J. N. Upshur, Professor *Materia Medica* and Therapeutics in the Medical College of Virginia, on nitro-glycerine and nitrite of amyl, the antagonism is not mentioned except oppositely: "Chloroform antagonizes nitro-glycerin and nitrite of amyl."

Nitrite of Ethyl.—As some readers of this article may not be familiar with the nitrite of ethyl, a few words are devoted to it.

It is manufactured after the same manner as the nitrite of amyl, and has similar chemical, physical, and physiological properties. And it is the *characteristic ingredient* of the well-known *spiritus ætheris nitrosi*, whose manufacture and composition is also similar to that of the nitrite of amyl, except in its alcoholic radical.

We are indebted to Dr. B. W. Richardson for a knowledge of its physiological action. It does not require much labor of imagination to suggest it, as found in the familiar sweet spirits of nitre, as probably a useful and convenient antidote, in the absence of nitrite of amyl, to chloroform narcosis and like conditions, instead of ether or alcohol—the latter of which, Bartholow contends, causes "serious mischief in cases capable of resuscitation."

For this purpose, of course, the spirit is given hypodermically, or by enema.

Trinitin, or *nitro-glycerin*, is too slow in these appallingly sudden emergencies, but may reinforce the other nitrites.

Nitrite of Ethyl.—Cold-blooded animals, after apparent death from its use, will sometimes spontaneously recover after an interval of nine days.

In warm-blooded animals, apparent death may be caused by it for six or eight minutes, after which time life may return for as long as half an hour, when they positively die.

Experiments with Chloroform and Nitrite of Amyl.—In a few experiments lately tried by myself upon the boring bee and upon toads, with what might be called a mixed anæsthesia with chloroform and nitrite of amyl, I was surprised at the *vis medicatrix naturæ*.

The boring bee is a nervous mechanic—in nervousness a type of the man of to-day, and he works with his gimblet more than eight hours a day. He has a comparatively large cerebro-spinal system, and a large thoracic vascular system.

Anatomically, the toad is a nearer approach to man. From the rapidity of his respiration, he soon shows symptoms of anæsthesia. During the first stage he becomes much excited, and may try to brush the vapor from his nostrils and mouth with his foreleg; his eyelids gradually close, his sphincters relax, his pores give out much moisture, his jaw drops, and all of his muscles relax. His respiration is soon paralyzed, as the respiratory apparatus is imperfect and weak as compared to man's; and as his cerebro-spinal system is small, and his heart apt to be fatty and his stomach and colon loaded, and from the reverse direction of his tongue, he soon dies.

About the year 1874, Dr. Landon B. Edwards, the present editor of this journal, when connected with the chair of *Materia Medica* and *Therapeutics* in the Medical College of Virginia, tested the antidotal properties of the nitrite of amyl upon a chloroformed cat, which experiment clearly proved its efficacy.

A cat of average size was chloroformed until apparently dead; it was then suspended by the tail, and a few drops of

nitrite of amyl, upon a handkerchief, held to its nose. In a few seconds it revived.

A second time the experiment was tried, with the same success.

A third time, the cat was apparently killed with chloroform, and held up by the tail, and, fortunately for science, but unfortunately for the cat, all of the nitrite of amyl had been used; and as the Nélaton method alone did not succeed, the dead cat was thrown out of the window to resume its other eight lives as best it could.

Since I witnessed that *experimentum crucis*, I have never felt comfortable in the presence of one under the full anæsthetic power of chloroform or ether, unless I saw the nitrite of amyl close at hand. And I think it culpable in the administrator of anæsthetics if he does not provide himself with the nitrites. But with amyl nitrite at hand, we may even entertain reasonable hope.

In the case of a boring bee, which had been experimented on with chloroform and nitrite of amyl, and which was found in a torpid condition the next day, a drop or two of nitrite of amyl applied close to its head quickly aroused it to fly away.

In the case of a toad apparently killed by chloroform, I kept his heart going with nitrite of amyl and artificial respiration for five minutes or more, after which he entirely recovered. After experimenting upon the toad with chloroform and the nitrite, and in which case artificial respiration was not tried, it was left for dead for six hours, when I commenced to sweep his somewhat dessicated body out of the office; the day had been very hot. Greatly to my surprise it showed symptoms of life; I tried the nitrite with the effect of arousing it, so that it brushed the vapor from its face, sat up and hopped, but soon returned into torpidity. I then swept it out, and the dews of the night probably completely restored it, as I could not find it the next morning.

The analogy is confessedly imperfect between bees and toads and man, but these experiments encourage to pro-

longed efforts and watching after death from anæsthetics or gases, with the hope that the vital spark may be again re-kindled by our efforts, or by the element of time.

In attempted resuscitation from drowning this is different, for commonly there are such physical changes produced in the lungs after from *two* to *five* minutes submergence as to preclude recovery. Nevertheless, conjoined with physical methods, the nitrite or its succedanea, should be tried.

Modus operandi of nitrite of amyl.—The physiological distinction between odorous and irritating emanations is not well defined. Although the fumes of the nitrite of amyl do not seem irritating in a sensitive or physical sense, how else can we explain its primary action in profound anæsthesia? It cannot in such a case irritate the olfactory nerve in the physiological sense; and if it did not, no motor re-action would follow.

It must irritate, in the usual sense of the word, the large root of the fifth nerve—the most sensitive nerve in the body, and one retaining its sensibility the longest—which, communicating with the pneumogastric through the facial, inhibits the depressor nerves of the heart.

Some patients have been saved from death by chloroform, by having their nostrils titilated with a roll of paper upon which some aqua ammonia had been poured.

Purely theoretical.—If Bernard's theory is correct, that chloroform suspends sensation by a temporary coagulation of the contents of the nerve cells, then the action of the nitrite of amyl may antagonize by speedily uniting with these coagulated cells, and thereby helping to restore their fluidity. It is soluble in chloroform in all proportions.

And here is an analogical theory which works well in practice. Delirium tremens is probably caused by accumulation of amyl or fusel oil in the nerve cells—chloral is the great remedy, and safe in the sleeplessness of the young drunkard. Chloral is *said* to be converted into chloroform in the alkaline blood and bile; hence deaths from it during digestion. Dr. Frank Woodbury says that patients can take an ounce of chloral when recovering from mania a potu

without ill effect. In a similar case I gave one hundred grains in less than four hours without bad effect. Before the age of chloral, deaths from alcoholism were quite numerous, as many of our older brethren can testify.

The base, *amyl*, in nitrite, deserves a few words.

The vapor of amyl is three times heavier than its liquid form, and it is very irritating, and it, more than the nitrite, may irritate the root of the sensitive fifth nerve in the nares, where it is easily reached, causing the happy re-action.

Because of the heaviness of the vapor of this most important ingredient, the patient's head should be bent back during its administration in chloroform narcosis, so that the vapor can *descend* into the nostrils. And if the nervous irritability has not been too much obtunded, there will then be no use in "standing the patient upon his head," if this dynamic spirit succeeds in touching the stilled heart.

But the antidote cannot be too speedily applied.

Caution.—Under the profound effects of chloroform or ether, consciousness is abolished and also sensation, except at the roots of the fifth nerve; and if, with too much of the nitrites given hypodermically, or by inhalation—which is less apt to be the case—the nerves of motion are further paralyzed, and the case is hopeless.

The nitrite of amyl has no effect except upon the motor nerves, and only the stimulating effect is sought in these cases.

The best form in which to carry nitrite of amyl is in glass pearls, each containing 2, 5, or 10 minims. These are very useful in saving time in event of need for the use of amyl nitrite after chloroforming children, or profoundly chloroforming adults. One of these pearls crushed in a handkerchief and held to the patient's nostrils, will, in a few seconds, restore to consciousness. Of course they are equally applicable after ether has been employed.

In a case of acute neuralgic headache, I used Peacock's Bromides with complete success, and find it the best nerve sedative prepared.—F. F. HENWOOD, M. D., Thompson, Pa.

ART. III.—Puerperal Septicæmia and its Surgical Treatment.
A Clinical Lecture.

By E. E. MONTGOMERY, M. D., of Philadelphia, Pa.

OBSTETRICIAN TO THE PHILADELPHIA HOSPITAL; PROFESSOR OF GYNÆCOLOGY IN THE
MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA, ETC.

Gentlemen:—I was recently called to a neighboring city to examine a patient who had been confined a week before, and had subsequently had a marked elevation of temperature. The patient was attended by a gentleman, who, I had every reason to believe, exercised every precaution to avoid infecting the patient. The labor was an exceedingly easy one, not attended by any unpleasant symptoms. As it was the first labor, there was a slight laceration of the vulvar outlet. This was not, however, considered sufficient to necessitate the introduction of a suture.

About the third day after the delivery of the patient, her temperature went up to 103° ; the following day it was slightly lower, and the next day higher, and upon the sixth day reached $106\frac{2}{3}^{\circ}$, at which time I was again called to see her. She did not complain of any distress or discomfort other than that arising from the high temperature. Pulse a little over 100; mental faculties normal, and no history of offensive lochia. The abdomen was carefully examined; palpated without finding any accumulations about the uterus, or any indications of tenderness. The uterus was about its normal size, freely movable and not tender upon vaginal examination.

She was given an anæsthetic—the bromide of ethyl—and a finger introduced into the cavity of the uterus, when an offensive odor was at once noticed. The cavity of the organ was filled with broken down tissue, blood clots, and decidua. I should say here that the patient had been subjected, from the first elevation of temperature, to an intra-uterine injection of a sublimate solution twice daily. The cavity of the organ was carefully curetted by means of the finger and curette, and subsequently washed out with an antiseptic solution; a gauze drain introduced to the fundus and permitted to remain for forty-eight hours. The temperature of the patient rapidly subsided following this treatment, and at the end of forty-eight hours became normal, and remained so for fifty-four hours. She then had a gradual rise of temperature varying daily, from 99° to 101° , this continuing for three weeks. The lochial discharge during the interval was at no time

offensive, although it was occasionally purulent in appearance.

At the end of three weeks from the first observation of the patient, I was again called to see her, and found her with a temperature of 106° . I carefully interrogated the different organs to determine the cause for this elevation of temperature. The uterus was found freely movable, greatly decreased in size, and no infiltration of the ovaries, broad ligaments or tubes. I again dilated the uterus, hoping to find within its cavity an explanation of the condition. Between the finger within the uterus and the hand over the abdomen, the uterine walls were carefully palpated, without finding any evidence of pus collection in them. The tubes were not enlarged, and a very slight enlargement of the ovaries could be determined. Although I had been called to the patient with the expectation that I would resort to an abdominal operation, I could not feel justified by the character of the symptoms presented in proceeding to the operation; therefore inserted a drainage tube in the uterus, and placed the patient upon medical treatment with the hope that the elevation of temperature was temporary and would subside without further operative procedure.

In thirty-six hours I was again summoned, and found the temperature still high, the patient then in a chill, and her temperature nearly 105° . In the absence of any condition about the uterine canal or vagina to account for the elevation of temperature, I resorted to an abdominal incision, with a view to determine whether there was anything within the cavity of the pelvis that should be sufficient to cause these symptoms. We had noticed a slight crepitation on the right side in abdominal palpation; the right ovary and tube were consequently raised up, but without finding the slightest adhesions, or any evidence of accumulation about the uterus. The ovary was apparently about twice its normal size, and apparently cystic. The left ovary and tube were then raised up, and a little more inflammatory appearance found about the tube, and a flake of lymph projecting over its abdominal end. The ovary was found to be about four times its natural size, and also presented the appearance and sensation of cysts. Upon the anterior surface of the ovary, a flake of lymph was adherent; this, however, was very small. I then examined very carefully the uterine walls to determine whether there was a possible collection of pus within them or the broad ligaments of either side, but found no evidence of inflammatory trouble any-

where in the pelvis. I then ligated the broad ligament, removed the ovaries and tubes, washed out the cavity, closed the wound, and replaced the patient in bed.

The ovaries were then opened, and much to my surprise in the left ovary was found a teaspoonful of thick, greenish, offensive pus. The subsequent convalescence of the patient was all that could be wished, and at the end of the convalescence she placed the child to her breast and soon developed a good supply of milk, which has since furnished the child with nutrition.

Now, in this case, we have a history which teaches an important lesson. The condition was evidently one of infection—infection which had begun in the uterine mucous membrane, had travelled through it to the right tube, and involved the right ovary.

Septic infection following confinement has in the past been a not infrequent condition. Under later methods of procedure, in which the value of aseptic or antiseptic methods in obstetrics have been introduced, the occurrence of septic condition is much more rare. Its frequency, however, is sufficient to warn us in impressing upon you the importance of observing every precaution to avoid bringing to a parturient woman any opportunity for contact with sepsis. For this reason, consequently, it is very important that you should exercise precaution in the washing of your hands, the cleansing of instruments, and every thing used about such a patient. Hence it is important to avoid the course that is usually pursued, of using soiled clothing about patients to remove the discharges which have taken place during the progress of labor. You should also make sure that the patient after her delivery has been thoroughly cleansed with a chemical agent—preferably the sublimate solution—with this solution washing away all the blood and discharge that has taken place, placing the patient upon a clean bed, with clean clothing, and apply a clean napkin to the genitalia. Make sure, too, that the uterus is thoroughly empty, that it does not contain remnants of the placenta, of decidua, or an accumulation of blood clots.

In cases in which it has been necessary to use instruments

or to interfere mechanically with the genital tract, it is important that the vaginal and uterine canals should be thoroughly flushed out with a disinfectant solution.

In the after-treatment of the patient, while it is not advisable to use irrigation of the genital tract, unless there is evidence of some septic infection, it is important that the discharges, as they make their exit externally, should be washed away several times daily with a disinfectant solution, and that a clean napkin or receptacle should be provided for the absorption of the discharge. In the care of the patient, it is important to have the nurse exercise the greatest care in regard to her own cleanliness, that she should not handle provisions or food for the patient without having thoroughly disinfected her hands before she proceeds to the attention of the genital tract. In other words, we have here a laceration of tissues in an extensive tract—a tract in which the absorbent vessels are exposed, and in which there is every opportunity for the multiplication of pyogenic bacteria, and, as in every surgical wound, the greatest care must be exercised to prevent its infection.

But occasionally, from the neglect of the attending physician or of the nurse, or from the development of conditions which, perhaps, existed in the individual herself at the time of labor, you will find that symptoms of sepsis arise. Under such circumstances, what should be your method of procedure? You have, as we have already said, a genital tract in which a number of fissures have occurred, the uterine mucous membrane presenting a large number of sinuses—vessels which offer ready entrance into the blood of septic germs and their ptomaine products. The broken down detrita, composed of blood and suppurating decidua and mucous membrane, afford an excellent soil for the development and multiplication of pathological germs.

Much has been done in the treatment of these cases by the use of intra-uterine injections, bringing in contact with the cavity of the uterus disinfectant fluids, and in this way rendering the soil less productive and more unfit for the development of the material. But we have to remember that

the injection usually comes in contact only with the superficial surface, and we have here the entire cavity of the uterus lined with a material of considerable thickness, which it is necessary should be removed before we can hope to render the cavity sterile; so that something more is needed than mere intra-uterine injections. The plan for accomplishing this is by the use of the curette—using the blunt curette—or, in some cases, we may proceed, where there is considerable projection from the cavity of the uterus over the site of the placenta, to the use of the sharp curette—then following the thorough use of the curette by intra-uterine injection, and in this way render the cavity of the organ sterile.

There is no better method of promoting and securing drainage of the uterus than by introducing into the cavity a twist of iodoform gauze to serve as a drain. It keeps the surfaces separate, prevents further decomposition, promotes by its presence increased serous exudations, and the ready escape of the discharge from the cavity of the organ, and also increases the muscular action of the organ, and consequently the processes of involution.

Now, this method of procedure will be sufficient in those cases in which the disease is as yet confined to the cavity of the uterus, and in which there has been but slight absorption of infectious material. If, however, the disease has extended into the tube, and from it to the ovary, we may find new centres of infection will be developed; or in those cases in which the patient herself has possibly been the victim of a previous attack of the disease as a result of gonorrhœal infection, we may have an accumulation of this material in one or the other tube, and this may be the cause of the development of an acute inflammation of the uterine mucous membrane. In such cases we cannot hope, by the plan I have just mentioned, to cure the patient of the condition. Nevertheless, in every case in which there is indication of septic infection, the first step should be to determine any possible cause for the development of the poison; and, second, where it is evident there is involvement of the uterine

mucous membrane, the prompt curetting of the cavity, and its sterilization by the use of a disinfectant solution, followed by drainage.

In cases, however, in which it is evident there are centres outside of the uterus which have been the source of the poison, or have resulted secondarily from it, the plan of procedure should be to accomplish their complete removal, so that where there is tubal trouble of a purulent character, or where there are symptoms of ovarian disease, the plan of treatment should be the removal of these organs.

In cases in which the treatment of the disease by curetting the cavity and accomplishing its drainage, as we have suggested, are ineffective in bringing about a cure of the condition, even where we are unable to determine, by careful bimanual examination, the presence of pus or inflammatory accumulations in the cavity of the organ, we should resort, after a reasonable length of time, to an exploratory incision, as was done in this patient, with a view to determine whether there is any accumulation within the pelvis to account for the disease. In a case in which there was doubt as to whether a distended ovary was filled with pus, it could be determined by making a slight puncture. The puncture of a healthy ovary or of a diseased ovary with an aseptic knife would not be attended with any increase of danger to the patient, and would be sufficient to render certain the presence of an accumulation such as we found in the ovary of the patient whose history has just been given.

Not unfrequently is it found in these cases that the disease, instead of extending along the mucous membrane, may extend to the sub-mucous tissues, forming mural abscesses in the uterus. I remember, in my early experience in the Philadelphia Hospital, having a patient who had an attack of puerperal fever. Under the treatment instituted in her case, she had apparently run through the progress of the disease, was convalescing, and on the road to recovery. Her temperature, however, remained slightly above normal, running from 99° to, occasionally, 101°; the pulse

remained frequent, over 100. After the patient had been up and about the ward, she was taken suddenly with violent pain, with symptoms of collapse, and died within forty-eight hours. Upon autopsy, it was found that a mural abscess had occurred in the fundus of the uterus, by which the entire fundus had been sloughed off, leaving the organ resembling a funnel.

In such cases, if the condition is determined during the life of the patient, the proper plan of procedure has been suggested, as the supra-vaginal removal of the uterus. It has seemed to me, however, that in every such case, if the condition can be determined, the better plan would be *vaginal hysterectomy*, as the stump of the uterus remaining is only a source of difficulty during the convalescence, and of subsequent annoyance. It is well to remember, also, that these cases of septic infection may arise as a result of neglected abortion or miscarriage.

A case recently occurred in my experience, in which I was called to see a patient suffering from a self-inflicted abortion. I was consulted as to the advisability of dilating the uterus and removing the evidently decomposing placenta. Upon examination, I found a mass of exudation which was apparently fluid, posterior to the uterus, and which I believed to be purulent. I suggested to the physician that to permit such an accumulation to remain would endanger the life of the patient quite as much as would the retained placenta. To attempt the removal of the placenta would only increase the risk of the rupture of the abscess cavity and the development of an acute peritonitis that would probably terminate in the death of the patient; that the proper method of procedure would be to prepare the patient for an abdominal operation, to immediately follow the attempt at removal of the contents of the uterus. Accordingly, in the afternoon of the same day, the patient was anæsthetized, the uterus dilated, the decomposed placenta removed, the cavity of the uterus thoroughly washed out, and then the abdomen opened. A pus cavity containing a half pint of pus was found behind the uterus and

emptied, the ovaries and tubes removed, a drainage-tube inserted, and the wound closed.

This patient had a normal convalescence from a condition that would certainly have been fatal had we proceeded by any other plan.

1818 *Arch Street.*

ART. IV.—**La Grippe, as it prevailed in North Texas.***

By F. D. THOMPSON, M. D., of Fort Worth, Texas.

In preparing a paper on *La Grippe*, I will try to describe the disease as observed by me in Fort Worth, Texas, during the years of 1890 and 1891.

I cannot now occupy your time with a history of the disease, which is no doubt familiar to you. It is sufficient to say that it was accurately described during the fifteenth century, and there is no doubt but that many epidemics had prevailed prior to that time. It is probable that the disease which appeared in the Athenian army in Sicily, 415 B. C., was influenza. Many epidemics have prevailed in all parts of the world since the fifteenth century, and the United States have had their share of them.

No classes of persons are exempt from this malady; the rich and poor, old, young and middle-aged, strong, robust and previously diseased, all are the subjects of influenza. Atmospheric conditions do not influence the disease. It appears at all seasons of the year. It prevails in hot and dry seasons in the West Indies, in India, Egypt, Cape of Good Hope, and the coast of Java. It prevails in low, damp districts on the sea coast, as well as in the driest climate.

Pathologists have been, until recently, undecided as to the *etiology* of the disease; but the indications now are, that it is due to a germ, and spreads as do most other contagious diseases. Prof. Tessier, of the Medical Faculty of Lyons, who was sent to Russia to investigate influenza, re-

* Read before the North Texas Medical Association, at McKinney, June 16th, 1891.

ports it to be a growth of Russian soil, "and when not a raging malady, is a smouldering one." Dr. Tessier calls the microbe "strepto-bacillus," and says it much resembles the pneumococcus.

The disease usually makes its appearance with a slight chill or chilly sensation, which frequently continues most of the first day. Fever follows the chill, but in adults as a rule, it does not exceed 102° F., while in children it often reaches 104° . The fever is accompanied with headache, pain in the back and limbs—in fact, patients often complain of pain all over. Pulse is full, but not increased in frequency in proportion to the temperature. Secretion of urine is diminished; and in one of my cases—a little girl three years old it was temporarily suppressed, or almost so. She passed only one ounce in thirty-six hours, and this was drawn off with a catheter. Urinalysis showed it to be normal except an excess of phosphates.

I have seen several cases of the abdominal variety where the disease was ushered in with great pain in the stomach and bowels, resembling cramp colic, and requiring three or four hypodermics of morphia within twenty-four hours, terminating in well-marked influenza. We have all the symptoms of coryza, laryngitis, pharyngitis, tonsilitis, discharge from the nose, eyes watery, and dry cough with hoarseness and dyspnoea. Taste and smell are impaired. At first, the bowels are constipated, but towards the end of the first week they are often too active. The pain is not always the same. Some patients suffer more with headache; others with backache. Some have the severest pain in the extremities, while a few suffer most with a "stitch in the side," like pleurisy, yet physical examination reveals no cause for the pain.

The disease runs its course in four or five days; many people being able to pursue their avocations after that time with perfect ease, and making a speedy recovery.

Most patients develop some of the various complications or sequelæ. The nervous depression, which usually makes its appearance on the fifth day, is the most frequent complication that we have.

As a rule, the temperature on or about the fifth day, falls below 98.5°F .

In every well marked case that I have had an opportunity of observing on the fifth day, the temperature registered only from 97° to 97.5 . This sub-normal temperature continues from three to five days—gradually returning to the normal.

The pulse in adults is usually sixty per minute and weak, when the temperature is 97° , and improves as the temperature rises.

During this stage of depression, we have, in ladies especially, strong tendency to hysteria; in fact, I have been called to several of these cases for the first time during this hysterical or melancholy stage. If the patient is subject to neuralgia, it will appear with renewed violence during this stage. If he has ever had bronchitis, this will return. If any bowel or stomach troubles have existed, they will now reappear. In short, it seems that if a person is subject to any disease, and has influenza, it makes the old trouble worse; and if he has a diseased organ about him, it settles on that. Pneumonia, in some parts of the country, is said to be a frequent sequel. This is not so here. During the present epidemic, I saw only one case of pneumonia complicating la grippe, and that was in an old lady 62 years of age, who was very weak, thin and delicate; the grippe ran its usual course. On the fifth day, temperature 97° , pulse 60, and very much depressed. On the next morning, she had pain in her right lung, with severe cough. That afternoon pneumonia was well developed, and the next day (seventh day of the disease) the left lung became involved, and she died that night. This patient never had a chill after the beginning of the influenza. After pneumonia set in, her pulse was never more than 80, and her temperature never rose above 102° .

I was called to see an old man, 70 years of age, early one morning. His history indicated that he had had influenza about five days. He was opposed to doctors and medicine, never having been sick in his life, and persisted in getting up every day. On the morning that I saw him he had sat

down at the breakfast-table and fell from his chair unconscious. He was pulseless, and his lips, ears, nose, hands and feet became almost black. He rallied temporarily under stimulants, but died in a few hours from heart failure.

A gentleman about 50 years of age, who had reached the depressing stage of this disease, got out of bed and walked up town four or five blocks. He said that it was all that he could do to walk. Presently he became unconscious and fell on the street. He rallied in a few minutes, was carried home and kept in bed for a few days, and made a good recovery.

Most ladies, who are menstruating regularly, will have their flow when they have influenza, whether it is the time or not. I have seen three abortions which, I think, were due to la grippe.

If I have correctly described the disease, then the *treatment* is easily arranged and clearly indicated.

From my conversations with other physicians, and short paragraphs in various medical journals, I am led to believe that some one of the coal tar preparations is generally used in la grippe, and many times quite freely. There are a few cases in which this is admissible. These are patients who are robust, with full plethoric habit, strong pulse, and temperature over 102°F. But, owing to the depressing effects of the disease, and accompanied with comparatively slow pulse, and only slight rise of temperature, I do not think it well to depend on the coal tar preparations to relieve pain. To relieve pain, I prefer morphia and atropia, with phenacetine added to suit the case. For an adult, I add from a half a grain to two or three grains of phenacetine—never giving more than one-eighth grain of morphia, and three one-hundredths of a grain of atropia. Except in the abdominal variety, the pains of la grippe yield readily to small doses of medicine. Of course, the bowels and secretions are considered and prescribed for as the case demands.

I do not think that quinia sulphate has any modifying

effects on uncomplicated la grippe. In the depressing stage, it is useful as a tonic.

When the pain has subsided, I often prescribe ext. nux vomica, proto-carb. of iron, and sulphate of quinia, in capsules, as a tonic. I have often used, with apparent benefit, aromatic spirits of ammonia, creosote water, and camphor water combined, as a stimulant.

The treatment will depend upon the age and general condition of the patient.

As the disease is an extremely depressing one, the treatment should be supportive from the beginning, with but few exceptions.

ART. V.—Some Matters Pertaining to Galvanism of Uterine Fibroids—their Etiology, Therapeutics, etc.*

By JOHN ASHBURTON CUTTER, M. D., B. Sc., F. Sc., New York, N. Y.

Historical.—Beyond those most intimately connected with the introduction of galvanism of fibroids, it may be said that my father alone, Dr. Ephraim Cutter, felt that the operation had a future of great promise. But now the principles involved are so generally recognized as correct, that the subject "Electrolysis of Myoma," has been dignified with a position on the calendar of the Gynæcological Section of the Tenth International Medical Congress, and is to be discussed by Apostoli, Keith, Zwiéfel and my father—showing that the original work done by one of the members of this Society during the past twenty years is bearing good fruit.

Your President, Dr. Symington Brown, having a case of fibroid tumor of the posterior wall of the uterus, after hearing of an angiomatic tumor in Gen. Kilpatrick, cured by galvanism by Dr. R. P. Lincoln, asked my father to treat his case. The patient was examined; and on August 21st, 1871, the first application of galvanism ever made to a fibroid tumor of the uterus was done. I quote from Dr. W. S. Brown's report, article entitled "Round Fibroid Tumor

* Substantially a paper read before the Gynæcological Society of Boston, June, 1890.

of the Uterus, Complicated with Pregnancy" (*Medical and Surgical Reporter*, February 5th, 1873, Vol. XXVIII, No. 6.)

"General Kilpatrick's tumor was diagnosticated as venous erectile, liable to sudden distension to twice its ordinary bulk; whereas, in Mrs. Pierce's case, the tumor was nearly as hard as cartilage, and not subject to much variation in size. Still it was concluded to make a trial of electrolysis, which was done twice under Dr. Cutter's supervision.

"On the first trial, August 21st, the two needles barely penetrated an inch; the direct current from a large Storher battery was applied for fifteen minutes with no appreciable result. A second attempt was made eight days later with stouter needles, but the tumor proved so hard and resistant that they penetrated but little farther. Dr. G. Kimball, of Lowell, the celebrated ovariologist, was present at the second trial and inserted the needles. The effect on this case was not much; it is classed amongst the non-arrests."

In a recent article by Dr. M. Greely Parker, of Lowell (*Annals of Gynecology*), the inference is left that this whole operation originated in Dr. Gilman Kimball's brain—not only the idea, but the means of operating. This is unjust, first to Dr. Brown, the proposer of the operation; and second to my father, who not only laid down the rules of application, which are to-day used by him, but invented the various appliances needed. In his paper before the Section of Gynecology of the Ninth International Congress held at Washington, 1887 (*Trans. Congress*, Vol. 11, p. 690,) I find:

"After this operation I proposed to Dr. Gilman Kimball, that we join in this matter. * * * * He was present August 29th, 1871, with some eight or more physicians, when we operated on Mrs. Pierce the second time, using a needle of platinum, which twisted and turned in his hand, and gave great dissatisfaction to all. Dr. Kimball was disgusted, and said he would have nothing to do with the operation unless better electrodes were produced that would penetrate surely a fibroid as hard as a bullock's testicle. At once I invented a needle of steel, shaped like a corkscrew, with the convolutions gold plated; this did not work, and I then brought out the so-called "Cutter needles," which were made so as to cut, and at the same time, relieve the tension of the tissues (which had been penetrated by a nee-

dle of cyndrical shape) and strong enough to avoid the risk of breaking off and being left behind in the fibroid."

Dr. Kimball (pp. 700, 701, same *Transactions*), remarked at some length on some of his first operations which he believed to be the first done.

"It would be doing injustice to Dr. Cutter if I were to omit stating that I am under great obligations to him for many important and useful suggestions bearing upon this subject, and particularly for his having supplied me with the various appliances which I have applied in most of my operations; and to him, probably to more than any one else in this country, is now due the present increasing belief in the great value of the electrolysis in the treatment of uterine fibroids."

This would seem to controvert Dr. Parker's paper giving credit of originality of design of appliances to Dr. Kimball. But to thoroughly settle the question, it is only necessary to refer to the full text of Dr. Kimball's first article on the subject in the *Boston Medical and Surgical Journal*, of January 24th, 1874. As this *Journal* is accessible to each member of this Society, I will not consume time in repeating the reports of the two cases in which every credit is given to Dr. Ephraim Cutter for his suggestions, inventions and assistance. The report their given of the case of Miss F., of Springfield, Mass., who had a large, very hard and irregular fibroid tumor of the uterus, of several years' growth, filling the pelvic cavity, and rising into the abdomen to an extent sufficient to suggest a seven months' pregnancy, has a great interest, as showing the natural history, so to speak, of the operation without anæsthesia. The great sufferings manifested by an hippocratic countenance and the signs of profound collapse, point to the exhibition of a very profound influence. The fortitude of this patient demonstrated that it is cruel to perform this operation when the subjects are not under anæsthetics; the shock is too great.

From this full paper, with cases, by Dr. Kimball, it will be seen that the first operation of galvanism of uterine fibroids was done under my father's supervision, at Dr. Brown's proposal, August 21st, and August 29th, 1871. At the sec-

ond operation, Dr. Kimball was present and inserted the needles. The second case attacked was Dr. Kimball's by him, December 26th, 1871, with needles furnished by Dr. R. P. Lincoln, and with battery furnished by my father. The needles were unsatisfactory, and hence were evolved the "Cutter needles."

In what is the operation under discussion different from the Apostoli operation? Apostoli uses a large abdominal electrode and the other electrode per vaginam. He has worked up the more delicate side of the operation very carefully; has reduced tumors, relieved pain, and stopped hæmorrhage. He has employed, with great care, instruments of measurements, and has somewhat severely criticised those that preceded him for not using instruments to metre the current employed. Still, if what he said at the last Congress was correctly reported, he has not cured any of his cases—that is, produced the entire disappearance of the tumors.

The battery used in the Cutter operation is composed of eight plates of carbon, and eight plates of zinc, each six by nine inches. They are arranged thus: Zinc-carbon, zinc-carbon, zinc-carbon, zinc-carbon, carbon-zinc, carbon-zinc, carbon-zinc, carbon-zinc. The zinc plates are connected on one side and the carbon on the other.

Now comes in the trouble. This battery has done a great many women good. Yet it has made considerable bother with electricians. They say you have a large current as to quantity, but not much intensity—*i. e.*, about 27 amperes direct current and 2 to 4 volts intensity. One medical gentleman wagered \$1,000 that the current from this battery would not traverse an inch of tissue; and this he proved on the blackboard before the Gynæcological Section of the Ninth International Medical Congress. Yet he was immediately followed by Dr. Garrett, who stated his experiments with an electro-metre during operation while the electrodes were deep in the tissues of a fibroid tumor. The ecstatic needle was swung round every time the current was made, though it had to pass through the tumor. A London sav-

ant was granted a medal for proving that a vessel could not cross the Atlantic under steam-power; another savant for showing that an Atlantic cable could not be laid. Physicists of great reputation lectured most powerfully against the statement that four messages could be sent over one wire at a time. The only way to prove that the gentlemen were wrong was to lay a wire and send the messages four at a time.

Gentlemen, it is not well for us to be proud. Only recently we were getting ready for an operation. The conductors usually employed are silver—*i. e.*, each a bundle of silver wires, one quarter of an inch in diameter. We could not find them. The battery was put in order, the fluid was made with care, and we tested with ordinary copper wire, hardly any current. Some thought was put on the matter, and the same copper-wire was doubled three times, making six strands for each conductor; then all the current wanted was obtained. The battery was all right, the fluid was all right, the connections were all right, but the conductors were not. *This brings in a principle, to-wit, that electrical currents are split up into many small ones, as shown in this quadruplex system, and in this test alone.*

It is well to remember that the cases that have been attacked by this method have been those of large tumors. The electrodes have been pushed through the abdominal walls into the substance of the tumor. We wished to have nothing to do with the skin, but wanted to apply the galvanism to the tumor.

Measurement.—This has been the great objection raised. Of course this was out of place years ago—that is, by milliampere-metres, as none existed. So the Yankee doctors simply relied on the conditions of the battery—the fluid, the connections, and the electrodes—testing the current, after all these were right, by the sparks drawn out on striking the electrodes and the capacity of heating platinum wire. This was empirical at first, but not long. So was Apostoli's first operation empirical; so is the first dose of every drug empirical, no matter how carefully it may have been tested

on dogs, guinea pigs, and other creatures who do not answer to drugs as we do.

Another point: These gentlemen laid down the rule in 1871 to use a current of great quantity and low intensity; this rule has not been followed up by all operators. Trouble will come, we think.

Next, we have two batteries which measure the same under careful tests. One has thirteen times the square surface of the other. The large battery we use on cases of fibroid, but the small one we will not. Amperes and volts do not measure all of the therapeutical actions of galvanism. There is something of the old rule of great quantity and low intensity; and, made from large plates, such a current is milder and safer.

The cases that have been treated by this method were, to quote again from my father's paper, "fibroids—large, hard, many-lobed, extra-uterine, packing the pelvis, filling the abdomen, occurring in cases of bad general health, with complications such as abscess, ovarian tumors, opium eaters, etc. The worst cases received the applications as well as the most promising." The result of 50 cases (see *Amer. Jour. Obstet.*, February, March, and April, 1887. or reprint, to be obtained of us) were—non-arrests, 7; fatals, 4; arrests, 25; relieved, 3; cured, 11.

The deaths were, first: A case that would be operated on at any hazard. Second: Patient who, after operation, disobeyed orders and dressed; went into cold room; death from peritonitis. Autopsy showed rent in fibro-cystic tumor opposite seat of puncture, but with no inflammation around the seat of puncture. The third death was in a case that, after third operation, ran into a typhoid condition, and was neglected by herself till too late. The fourth death in an opium eater.

But, from my study of reports, I cannot find other publications that give the details so fully, and that have attacked so large tumors and produced the results that have been produced by this Cutter operation.

The wonderful results that I have seen obtained in cases

of large tumors by one or two operations have caused me to ponder and study, and to feel that we are still only on the border line of a new realm of positive therapeutics as to these tumors.

Etiology.—A German pathologist, whose name I cannot recall, has stated that 75 per cent. of the women he has examined after death had some kind of a fibroid tumor of the womb. He of course included all tumors, if no more than an inch in diameter. This is a somewhat appalling statement for women and also humanity.

At the 1889 meeting of the American Medical Association, I read before the Section of General Medicine a joint contribution (E. and J. A. Cutter) on "Trophopathy in the Fatty and Fibroid Degenerations." The cases mainly cited were of Bright's disease; but two were of fibroid tumor of the womb. At this same meeting we presented to the Committee of Dietetics a report on "Feeding in the Wasting Diseases," giving statistics of one hundred cases of tuberculosis, fifty cases of fatty and fibroid degenerations, and fifty cases of male neurasthenia. Under the cases of fatty and fibroid degenerations were cited—twenty cases of Bright's disease, eighteen of tumor, and twelve of cancer, so-called, treated by food.

Both my father and Dr. Kimball allude to fibroids as a disease of nutrition. But the opinion given the Committee on Dietetics, with some explanation, was that fibroid and fatty degenerations are systemic conditions, as a rule, and that the tumor is an expression of this systemic condition. I will not allude to the fatty degenerations, but proceed to the consideration of the fibroid.

A woman in 1886, aged forty-six, was sick with a severe cough; copious expectoration, which was gravelly, and contained fibres of the elastic and inelastic lung tissue; the blood was abnormal; the urine albuminous, and contained casts. At the fundus of the womb was a tumor about two inches in diameter. By medication and careful dieting, which was principally beef, she recovered—that is, to-day the urine is normal; the tumor is no more; the cough and expectoration have ceased. The woman lives and is happy.

Here certainly was a systemic condition of degeneration, beginning in fibroid of the womb, following fibroid degeneration of the kidneys, as the result of fibroid degeneration of the lungs.

It is well to ask why was the line of dieting pursued in her case adopted? This patient had been a large eater of vegetable food. She filled her stomach with the products of fermentation—carbonic acid gas, alcohol and vinegar. The gas slowly paralyzed the tissues of the lungs; under this slow-going paralysis, nature did the best she could and, not being able to make healthy tissue, multiplied that low grade of tissue, called fibrous. Moreover, the slow-going paralysis extended to the blood glands, the spleen and mesentery, so that they did their work faultily; and therefore the blood, instead of being free from abnormal products, was filled more or less with the vinegar yeast which her stomach and bowels contained. Besides, the red corpuscles suffered, instead of spreading out and passing easily through the capillaries, by their improper work in the glands, lost their coating of neurine and stuck together in masses; again, the fibrin filaments increased in size and strength; a capillary, is 1-3000th of an inch in diameter; a red corpuscle, 1-3800th. In health, the corpuscles go through the capillaries; but if they are stuck together in emboli—if the serum contains yeast, fibrin filaments in excess, and also emboli of vinegar yeast spores—then the heart is called upon to do much more work to push that blood through the capillaries. The blood also going with difficulty through the capillaries is caught there more or less.

Now this is going on all over the body, and difficulty may ensue with any tissue. Indeed, this woman certainly had enough to cause her disease.

As a rule, when a tissue is partially paralyzed, no matter what the cause—carbonic gas, sulphuretted hydrogen, overloaded and sticky blood, want of nerve force, want of chemical elements in the serum—nature will build with her poorest tissue, or she may revert to embryonic types, and then cancer comes in with its frightful devastation.

A number of years ago, my father was called to see a case in Jersey, that had been diagnosticated as tuberculosis. He found the blood normal. The woman had profuse cough and expectoration. The sputum contained no lung fibers, but was full of gravelly matters. The urine contained albumen, casts and fatty epithelial cells. He made a diagnosis of Bright's disease of the kidneys and lungs. On telling the late Dr. Elsberg of the case, Dr. Elsberg said: "You are right, and German pathologists have written about it." The case was not under his care and she died.

Soon after, a similar case followed, and was improved by treatment. Then he took charge of himself, was poisoned by sewer gas, and died.

The third case was Dr. Elsberg himself. His was a case of Bright's disease of the kidneys. Under my father's care his urine cleared up; he then ate as he pleased; he died of what was called pneumonia; in his coffin he presented the bloated appearance of a man dead of Bright's.

The fourth case was a woman who lived in New England; profuse expectoration; urine heavily albuminous; stomach upset all the time practically. She died while under my care, last fall, of congestion of the lungs, though I was not with her at the time of her death.

I cite these cases of systemic fatty degeneration. But let us go back to the fibroid condition.

A man in 1886, a bartender who had always lived indoors, and ate principally of chicken and the foods that are to be obtained in his place of business, was treated for Bright's disease, enlarged heart and diabetes. He was cured and is well to-day.

A man, aged fifty-six, in 1882, was sick with fibroid condition of the stomach and liver—desperately ill; he was carefully watched and dieted, and brought around so that he is well to-day.

Now these degenerations are systemic in that they may come in any tissue, but they may not affect all parts of the body. I have seen cases of Bright's disease where blood was normal. Why? Because the blood glands were not involved. Why this selection should be I know not. As a specialist, treating only chronic diseases, I am amazed in following my work, to see how often that the causes lead back principally to the stomach and our modes of life.

The commencement of a diseased condition seems to be about the same; but the final expression may be very varied. One of the old cases of fibroid tumor of the womb—a woman having an immense tumor was cured, and now at times she suffers with unsteady gait, and if she did not take care of herself would be a pronounced case of ataxia.

As to modes of life: This is as broad a part of the subject as the study of the processes involved in the mal-formation of tissues resulting in their degeneration. A woman that had carried a fibroid tumor of the womb for fifteen years, was one spring compelled to move into a house that had not been used during the winter, and which stood on marshy grounds. She overworked; the tumor changed into cancer, attacked the bladder and killed her.

This is a hasty, intemperate age. Young men waste their stock of nerve force in athletics; they build up immense muscles so that they can pull a boat through the water a little faster than some one else can. By so doing, they not only harm the heart and lungs by the terrible strain put upon them, but in the fever of excitement and the actual potential waste of nerve force to make all that absolutely useless muscle, they stunt themselves, and in a few years turn up in our offices. It seems to me to be criminal for this frightful waste of strength to go on. The man that is going to succeed is the one that has brains, and one without cultivated brains is good for nothing. I do not know how many years it will take for the American people to see the folly of this great athletic craze. *Physical training and athletics are altogether different things.*

Only a few days ago, one of my patients said to me, pointing out of the window, "There, doctor, are two healthy girls." I told her I hoped so, but doubted it. In the same way that young men have run riot in their exhibition of athletics, so young women run riot in careless eating, late hours, etc. There is no need of my bringing in such statements before you. They are all patent enough.

When the time comes when we shall treat people for their health, and keep them well by watching the blood, urine,

their modes of life, what they eat and do, detecting departures from healthy standards, then will we be more happy as medical men, and an immense load of sorrow, pain and suffering will be lifted. Perhaps such a time will be the millenium, but I intend to do what I can to bring people to place more trust in the medical man as an adviser for health as well as sickness. Perhaps we should be better educated to be able to detect the beginnings of departures from health to disease. But this thing is certain: With even our present knowledge by careful study we can detect very much as to these changes; and if the people would be willing to pay for such work, they would receive in return many times over the value of their investment.

Last May, a young man, of eighteen, came under my care for tumors of the neck. The largest extended from behind the posterior margin of the sterno-cleido mastoid to the front of the neck, and protruded two inches laterally. His blood was tuberculous and syphilitic. Weight, 125. He was medicated with bin-iodide of mercury and succus alterans alternately. Diet of chopped beef, *i. e.*, freed from all connective tissue and broiled; no other food. Ammonia sponge baths daily—one teaspoonful to a pint of water. Lithia water locally. In July the tumors were softening; drew fluid from one of them by hypodermic needle, and found that it consisted of corpuscles undergoing amyloid degeneration; it soon broke. The fibrous tissue under diet gradually softened. At the end of six months he had gained thirty-five pounds. His blood had become normal as to tubercle; syphilitic spores greatly diminished.

To have operated on this young man would have meant to have cut his head off. Certainly medicine has done here more than surgery could have done, provided it could have removed the tumors. It would not have cleared up the blood. This case is a composite one, but one of great value. You can examine him at your leisure.

A Brazilian woman, unmarried, thirty-five years of age, was under diet for two or more years for her immense tumor. She appeared like a woman at full term. The tumor was held *in statu quo*, and she went on with her literary work. She was an agnostic, but feared death. After much persuasion, she allowed us to galvanize the tumor

per profound abdominal puncture under ether; after the first operation, the hitherto smooth surface was broken up, in one week's time, into five or six tumors. She had another operation, and then went home. She wrote that she has left off diet, and is taking chloride of sodium and gold, and that her tumor is fast decreasing; that her previous treatment has *not* been of great advantage to her.

We answered her that it is the history of cases like hers to have the operations, and then get the final result in one, two or three years' time.

A woman, over sixty years of age, with an immense fibro-cystic tumor. Life prolonged for over a year by rigid diet. Finding that she was going down, we gave her two operations per abdomen. After the second operation, there was leakage of blood into the abdominal cavity as ascertained, when she had been treated, by the presence of blood in fluid. No fever. Tumor growing softer. The case a tremendous one, and I would like to see others try their hands on such. It is considered a miracle by her medical relatives that she is alive. In her case, during operation, the points of electrodes were six inches apart, yet her pulse became full and strong. A galvanometer needle was swung five degrees. After the second operation, there was considerable leaking of a thick, whitish, sticky fluid, which would hold to the finger like molasses candy.

It is well to remember that this gluey fluid is the result of the secretion of the partially paralyzed tissues inside of her abdomen. This part of the subject needs more elaboration.

This woman, during summer, lost appetite; the disease began to extend to her stomach, and she died in October, 1890. A hasty post-mortem was made by me, assisted only by a layman. The disease in the lower part of the abdomen was gone. In the left side, in the abdominal muscles and extending to the stomach, was a large growth which, under the microscope, proved to be epithelioma. We learned after her death that she had fractured two floating ribs, some thirteen years or more ago, and eight or ten years before she came under our care, had consulted a surgeon in Philadelphia for advice as to abdominal troubles. She became greatly straitened in her financial affairs about a year before her death, and the increase of the cancerous disease we believed to be due to the great worry she was under.

This case, when commencing treatment, January, 1889, was sick with peritonitis, and her relatives were waiting for her to die.

The history is like that of many others, to-wit, outside matters often carry off our cases by the influence they have on the progress of treatment.

My deductions, historical, etiological and therapeutical, are:

1. This operation—deep galvanism of fibroids—originated in Massachusetts at the proposal of Dr. W. Symington Brown, your President.

2. The details were worked up by my father, as to rules of application, the battery, electrodes and conductors.

3. Fibroid tumors are an expression of a systemic condition, a degeneration.

4. Cases of large tumor have been cured by diet alone. (See *American Journal of Obstetrics*, 1877, October, "Food as a Medicine in Uterine Fibroids." E. Cutter. "Feeding in the Wasting Diseases.") The closer patients can live on a beef diet, usually, the better they do.

5. Galvanism stimulates the vaso-motor system. It causes contraction of the uterus, in one case resulting in the expulsion of the tumor per vaginum. (See *Transactions American Medical Association*, 1879, p. 257.)

6. Galvanism does many other things: it effects the nutrition of tissues; it enables the nerve centers to recover their control of the body, *and it does things we know nothing about.*

These tumors are no longer opprobria; and by greater unity of action as to drugs, food, electricity and watching, the modes of life, many more patients may be cured.

The electrodes are peculiar. Were it not for them, this series of cases would probably never have existed. It is a small matter, perhaps, to speak of, but not a small matter *practically.*

Certain, controllable, and deep penetration has been regarded as an essential. It would not answer to have an electrode that would twist, jump, or shoot off wildly among

viscera. The fibroid alone must be penetrated deeply, and in the direction which the operator deems the most desirable. The following device has been found to answer every purpose: An ordinary surgeon's director was taken, its point and edges sharpened, and an ebony handle was fitted to the flattened end, and two inches of the larger end were japanned for insulation. The dimensions are as follows: Length of instrument over all, $8\frac{1}{2}$ inches; of blade, $4\frac{1}{8}$ inches; width of blade at widest part, $\frac{3}{8}$ inch. The foramina in the metallic portion of the handle are sufficiently enlarged to readily take in the ends of the conductors. The angles made by the two wings of the blade may be represented in section by the letter V. The point of the angle is made dull. The effect of this arrangement is to draw the tissues over the sharp edges, represented by the free ends of the letter V, and thus cause a ready section of the tissues penetrated. It is evident also that the union of the two blades at this angle offers great resistance to bending in any direction, as seen in the firm union of the nasal bones of the face, or in the corrugation of metallic life-boats. It has been found that these electrodes become granular and dull by use, rendering it advisable to have them sharpened often. It has also been found that the introduction is facilitated by making punctures through the skin with a lancet.

Application of electrodes. The patient is anæsthetized and the electrodes are introduced deeply into the substance of the growth, so that they do not approach each other within a half inch.

Where? This usually depends upon the circumstances of the growth. If unilobar, and in the cavity of the abdomen, one electrode is passed through the skin in one side of the tumor, and the other in the other side of the tumor. Or if the lobe or tumor is small, one electrode may be passed under the other at a distance of half an inch. If the tumor occupies the cavity of the pelvis, and has several lobes in the abdomen, one electrode may be pushed in from the rectum or from the vagina, and the other elec-

trode may be passed in through the abdominal walls. If the fibroid is confined to the pelvis, both electrodes are to be introduced through the rectum or vagina. Care should be taken to avoid any strongly-pulsating blood-vessel. It has been found immaterial as to which electrode is passed in or placed first.

How long did the application last? They have varied from three to fifteen minutes in duration. The latter time is too long. Our best result was accomplished with only three minutes continuance of the current. The length of time was adjudged from the systemic symptoms. If the pulse becomes accelerated, the respiration hurried, the face pinched, the countenance hippocratic, and the skin sweaty and cold, it was thought time to stop. Etherization causes these symptoms, and should be allowed for—that is, not to push the time too far. The first operation should be short, and, if well borne, the time may be increased in future operations.

How often may applications be made? This depends upon the case. It has been done every day for a week. Usually once a week or a fortnight is often enough. If the systemic and local effects were not severe, the operation was renewed oftener than when the effects were profound.

Patients are usually put to bed, and arrangements effected whereby they may lie quiet for a few days. If, on the next day, they have no pain, feel well, have a good pulse, normal skin, good appetite and morale, they have been allowed to move about at will. If they have had severe pain, morphia subcutaneously and hot water and alcohol, equal parts, to the abdomen, are resorted to. If there was prostration, stimulants were used. It is a severe operation, and should be so regarded by the patient, in order to secure proper care and nursing. It is astonishing how well some bear the operation.

The gentlemen, in discussing paper and examining electrodes, said they were smaller than those formerly used. This, my father says, is erroneous; the electrodes I exhibited were the first made.

As much reference has been made to diet, I refer to directions for feeding on pages 276-279, July, 1890, number of the *Virginia Medical Monthly*.

The Ariston, Broadway and Fifty-fifth street.

ART. VI.—**Cataphoretic Treatment of Goitre by Iodine; of Chronic Orchitis; of Uterine Fibroids, Etc.***

By HUNTER McGUIRE, M. D., LL. D., of Richmond, Va.

EX-PRESIDENT SOUTHERN SURGICAL AND GYNÆCOLOGICAL SOCIETY, ETC.

About six months ago, Dr. Waite, of the firm of Waite & Bartlett, of New York city, gave me a cup-shaped electrode, and demonstrated to me the fact that, by its proper use with a galvanic battery, a solution of muriate of cocaine could be driven into the skin and complete local anæsthesia produced. A small piece of absorbent cotton, or piece of blotting paper, saturated with the solution of cocaine, was put into the shallow cup of the instrument, and the electrode attached to the positive pole of the battery. The electrode was then placed upon the skin where the insensibility of anæsthenia was desired, and the sponge on the wire joined to the negative pole was placed on some convenient neighboring part.

It required a current of four or five milliamperes to drive the cocaine through the skin and make the anæsthesia complete—the insensibility extending for some distance below the surface of the skin.

A day or two after the above demonstration was made to me, about January 10th of this year, a case of enlargement of the thyroid gland came into the hospital (St. Luke's). The goitre was bilateral, old, very large, hard, and seriously interfered with respiration. It had resisted for years the ordinary treatment of such growths. Internally, iodide of potash, iron and mercury had been faithfully tried; and, externally, at different times, iodine and biniodide of mercury

* Notes used in leading a discussion before the Richmond Academy of Medicine and Surgery, July 6th, 1891.

frequently used. The goitre steadily grew; and, lately, its increase was so rapid that the lady, in great alarm, came to me to ask for some surgical operation. She had spasmodic attacks of palpitation of the heart; frequent spells of giddiness or vertigo, but no ocular protrusion.

Instead of attempting the removal of the gland, I determined to use iodine in the cup-shaped electrode, and see what effect it would have on the growth. I put in the cup of the electrode some absorbent cotton first dipped in water and squeezed as dry as I could get it; and on this cotton I poured ten or fifteen drops of tincture of iodine. The electrode, thus prepared, was placed on the most prominent part of the goitre—the negative pole on the back of her neck. The galvanic current was then turned on until the milliamperemeter showed the strength to be six or eight. This current was kept up for ten minutes. While using it, she told me she tasted the iodine—and afterwards that this metallic taste in her throat lasted for hours.

When the electrode was removed, the cotton was found simply stained with the iodine, but most of the iodine had disappeared.

I repeated this application of iodine and electricity every day for three weeks. Not always, but nearly every time she said she tasted the iodine, and said that this was the most disagreeable part of the treatment. The tumor gradually grew smaller—at first quite rapidly—but afterwards more slowly, getting more and more indurated as it contracted. The cardiac and cerebral symptoms disappeared completely.

This patient, after three weeks, was called home by the illness of her child, and did not come back for a month. The goitre, however, continued to decrease while she was absent. When she returned, the applications were again made daily for three weeks. The gland was reduced to about one-fifth of the size it was when the treatment was begun, and, in spite of all further use of the remedy, remained stationary. But all of the subjective symptoms were gone, and the lady left me in excellent health.

Two other cases of chronic goitre have been treated in the same way, and with the same results—the hypertrophy diminishing, rapidly at first, then more slowly, then reaching a point when it became stationary.

In four cases of recent hypertrophy of the thyroid gland in young women, the enlargement rapidly disappeared under the use of this measure.

Iodine and electricity have, of course, been long used for goitre. How much of the good I have obtained is due to one or the other of these agents, I don't know.

Lately in a case of pronounced exophthalmic goitre I used this treatment with quite rapid diminution of the enlarged thyroid gland and a decided amelioration of the other symptoms. The tendency to syncope and dizziness were lessened and pulsation of the arteries diminished, but no perceptible change in the ocular protrusion resulted. The case is too recent, however, to report.

In several cases of chronic inflammatory enlargements of other parts, I have used this measure with very positive good.

In a case of chronic orchitis, it acted promptly and decidedly.

The treatment of fibroid tumors of the uterus by electricity, after the manner of Apostoli, is used by many surgeons. No one who has tried it faithfully and patiently can have any doubt of its great value in very many cases. For several years I have used it, and with great good. Lately, when I could reach the tumor through the vagina, I have used iodine after the plan just reported, letting the current go as high as 10 milliamperes only. I have obtained very positive good in this way, and without pain to the patient. Under its use, the bleeding will cease, the pain disappear, and the tumor grow smaller, just as well as when the electrode is introduced into the cavity of the wound, and the current made as strong as 100° to 200° milliamperes.

I am having constructed now a small electrode, to see if hypertrophy of the tonsils cannot be reduced in this way.

Of course, if it is valuable, it can be used in a great variety of ways and for many purposes.

I have made some experiments with other medicines, but have not gone far enough to make any report.

If fluid medicated agents can be sent in this way into a growth, would it not be well to try this method of treatment in cancer in its early stages?

ART. VII.—Animal Alkaloids.*

By THOMAS P. GARY, M. D., (Deceased,) of Occala, Fla.

LATE PRESIDENT OF THE FLORIDA MEDICAL ASSOCIATION, ETC.

The discovery of these substances is so comparatively recent, that the important problems of their relations to diseases, as a causative factor have not yet been sufficiently appreciated by the profession. But a great deal may be done alike in the prevention and cure of diseases by attention to the personal physiological pathology of the patient.

Even if the bacterial origin of all infective diseases were to be fully established, the main teachings of the great importance of soundness of tissue, and adequacy of function, should be most strongly impressed as the conditions essential to resist disease; for it is only in the soundness and vitality of blood and tissues, and the presence in them of those normally characteristic chemical substances, which are the result of their healthful life, that our safety lies, and in which the power exists of checking the ingress and progress of all micro-organisms (whether pathogenic or non-pathogenic) by the direct adequacy of the vital re-actions of those tissue elements themselves. Undamaged tissues of standard vitality, perfectly resist the entrance of invading

* The author was preparing this unfinished MS. for this Journal, when taken ill a few days before his death June 10th. Enough is written to lead the reader to see the line of his suggestions, and to appreciate their importance. We are indebted to his friend, Dr. R. P. Izlar, of Ocala, for forwarding us the MS.

organisms; on the other hand, damaged tissues, with lowered vitality or impaired adequacy of function, favor the entrance of pathogenic organisms, whence the body may become an easy prey to their influences.

May we not admit that the living organism is capable of fabricating various *alkaloids*?

Bio-chemically, such a capacity has been proved to demonstration, and it is probable that poisonous alkaloids are continuously being formed in healthy men and animals by the decomposition of albumen in the intestinal *canal* during the process of digestion, or in the blood and tissues generally by the metabolism, which occurs during the functional activities of life. A considerable portion of these alkaloids is, in all probability, destroyed in the body, and some are excreted in the urine and *fæces*, from both of which powerful poisons have been extracted.

Were all the alkaloids to be retained in the body, poisoning would undoubtedly ensue. Bouchard considers that the alkaloids formed in the intestine of a healthy man in twenty-four hours would be sufficient to kill him if they were absorbed and excretion stopped. He finds that the poisonous activity of even healthy human *fæces*, is very great; and a substance obtained from them by analysis produced violent convulsions in rabbits. When the functions of the kidneys are impaired so that excretion is stopped, *uræmia* occurs. He also thinks that the nervous disturbance, which occurs in cases of *dyspepsia*, is due to poisoning by *ptomaines*.

Health must therefore always, and can only be a phenomenal phase of life, which is relative and contingent; life's equilibrium lies between the rough and the smooth. When the vital functions are performed in a united and harmonious manner, which experience has taught us to regard as normal, then is the wholesome unity brought about which constitutes health. It is a fact that the vital processes are much more readily arrested by the accumulations of waste products within the organs of the *body* than by any *want of nutriment* of the organs themselves. Thus it is our organism is constantly dying, and strange as the paradox may

sound, we can not live unless it does die. How precarious, therefore, is the condition we call health, and how by the simple accumulation of cadaveric material, disease may manifest itself. How scientifically and also prosaically literal, do the truths stand out, that in the midst of life we are in death, and that as we begin to live, so we begin to *die*.

To resist the auto-infection to which we are exposed, we have the physiological modes at work in our bodies; and these consist of the elimination of the excretions by the liver, the kidneys, the skin, the lungs, and the intestinal membranes.

Sir Andrew Clark read a paper before the Medical Society of London, on Chlorotic Anæmia, in which he adopts and confirms the conclusions of Bouchard, and says that it is impossible to doubt that poisonous alkaloids are formed in the alimentary canal; that unless excretion is seriously diminished, they must be in some degree absorbed; and that mixing with the blood, and entering the tissues, they must produce some sort of injurious effects determined by the rate of absorption and amount of the absorbed alkaloids.

In the view I have endeavored to expound as to the antecedent factors which may combine to produce disease, we can not fail to recognize a partial concession to humoralism, seeing that poisoning or auto-infection by soluble animal alkaloids is in reality poisoning by the organic liquid which has undergone deterioration; and that from the chemical demonstrations of Gautier, the clinical observations of Peter, and the critical exposition of Drs. A. M. Brown and Lauder Brunton, Dixon, Mann and others, the doctrine of spontaneity is as true of health as of disease; and now looking to the future we know not in what direction the next advance in practical and scientific pathology may be made.

But as yet, is has not been fully established the manner in which such microbes act, or the relations which exist between them and disease.

The presence in the system of microbes, cannot be considered as the actual cause of the malady complained of, and it is just as reasonable to suppose they are

the products of the changes produced in the system, as to ascribe the disease to their presence.

Disease only is present when certain changes take place in the tissues of the organism which induce disturbances in their functions; and the detection of microbes in the diseased organism, is but an initiatory step towards the discovery of the cause of disease and its mode of operation. In other words, the presence of a microbe is suggestive of the inquiry into these antecedent factors which have combined to bring about the disease of the morbid conditions favorable to the development of the microbe. There is a great space between the concurrent factors in the physiology of life which bring about disease, and the impressions which are left by diseases as evidence of their having existed. Whether these be of a microbial character, or morbid changes of anatomical character, is beyond the powers of the anatomist to determine, and is left to the chemist to find out.

It is a fixed fact, that molecular death precedes the existence of the bacterial microbes, and that accounts for great diffusions. The material upon which they grow and thrive are found everywhere, and when dead matter of organic substances are found, there also you may look for bacteria. They cannot be found in healthy bodies, and only develop in morbid altered tissues. We are thus compelled to accept the conclusion, that at present the evidence regarding microbes, is that they come after the antecedent factors producing any particular disease.

A Point in the Kemmler Case.

One of the questions passed upon by the Court of Appeals of New York in the famous Kemmler case, was, whether it was proper for physicians who were sent to the jail to examine a prisoner accused of murder, whose defense was mental responsibility, to testify for the prosecution as to his mental capacity.

The court held that the visit did not give rise to the relation of patient and physician, and did not have the result of compelling the accused to give evidence against himself.

ART. VIII.—Abattoirs—Notes on System and Statistics.

By W. H. HARBAUGH, V. S., of Richmond, Va.

It was Napoleon who originated, and first caused to be carried out, the idea of having all animals that are used for food, killed and dressed in a public slaughter-house, called an *abattoir*, under proper sanitary regulations. This fact is not the least of the many reasons why he deserves to be remembered as the Great Napoleon.

Other European cities were slow in following the example set by Paris; but, as veterinary science advanced, the necessity of scientific meat inspection became more manifest, and now the *abattoir* is as common, and considered as necessary, as any other public institution in Europe.

Among the very best conducted *abattoirs*, the one at Berlin may be cited as an example. From an editorial in the *Journal of Comparative Medicine and Surgery*, compiled from the Report of the Superintendent, Dr. Hertwig, the following extracts are made:

The law makes it "obligatory that all animals destined for slaughter in and around Berlin, should be killed at one locality. It is evident that such a law rendered very great changes in the manner of doing business on the part of the butchers; yet it must be said to their credit that they have nearly all seen its benefits to themselves as well as the public. The number of animals slaughtered (during the year referred to) was 93,387 cattle; 78,220 calves; 171,077 sheep; 244,343 swine. The number of butchers located at the works during the year was about 567. During the winter months numerous private persons came to the works to slaughter their own swine. According to the nature of their calling, the butcher may be divided into three classes, viz.; wholesale, retail, and contract butchers, or such as do work for others instead of buying animals on their own account.

"All the flesh that is here produced is not destined for consumption in and around Berlin alone, much being sent into the interior of Germany, especially pork."

That there was much work for the veterinary inspectors, may be taken for granted; while the following quotation will show that their work was an urgent necessity:

"All animals are subjected to a most rigid examination both before and after slaughtering.

"The diseases which have during the past year led to the condemnation of the entire animal, were: Tuberculosis 182 times, hog cholera 72 times, icterus 38 times, dropsy 18 times, unhealthy appearing flesh 9 times, badly bled 3 times, putrefaction beginning 1 time, echinococci 1 time, measles 1,621 times, trichiniasis 216 times, lime deposits in flesh of hogs 19 times, actinomycosis in pork 15 times.

"Single parts or organs were condemned in 21,229 cattle, 86 calves, 4,806 sheep, 7,401 swine. Tuberculosis was found in cattle 2,613 times, in calves 2 times, in swine 1,313 times, which led to the condemnation of 102 carcasses and 4,226 single organs in cattle, 2 calves, 78 swine, and 1,940 organs of the latter."

The reader will observe that, although tuberculosis was present in a great number of cattle and swine, the whole animal was condemned only 182 times; but this was before advanced scientists considered it necessary to condemn more than the affected parts.

The editor of the *Journal* comments as follows:

"The time will certainly come, when, nobody can tell, when every city will have its abattoir for the slaughter of all and every animal destined for human consumption, even though it be for the use of the owner's family, and when all such animals will be subjected to veterinary inspection both before and after slaughter."

That the same reasons exist in this country, in this State, and in this city, why an abattoir should be established, and all meats undergo inspection, there can be no doubt.

We often hear objections to Western meat, but seldom do we hear of any danger from stock raised in the East. As a matter of course, it would be only just and equitable to frame the law in such manner that all meats intended to be sold for human food in this city should undergo inspection before they could be legally exposed for sale.

But the greatest danger from diseased meat is not in the consumption of Western cattle. To get the facts on this subject, the writer has had some correspondence with veterinarians, who are in all respects the very highest authorities on this point.

Dr. Chas. B. Michener, for some time Government Inspector of stock in New York, referred the writer to statistics of

his in the possession of Dr. Williamson Bryden, veterinary live stock inspector for British steamships at Boston, Mass. In a recent letter to the writer, Dr. Bryden says: "Dr. Michener wrote me as follows on the 13th of January last.

"I have had certainly *unusual facilities* to learn the extent of tuberculosis in cattle in and about New York city, and also at the slaughter houses of New York, to examine the Western cattle here killed. Of these latter I have seen *thousands*, and am sure that less than one-twentieth of one per cent. are affected.

"He continues to inform me that some time ago he made the following estimate from his statistics of cows from in and about New York city, that he had seen slaughtered from March, 1889, to September, 1890, inclusive, giving only those herds in which he had found tuberculosis to exist.

"Found in such herds 1,379 head, of which 165 were tuberculous—about one in nine."

Dr. Bryden remarks: "My own experience in New York was confined to a few ship loads for ships belonging to companies whose regular lines are between Boston and Great Britain. It endorses the opinion of Dr. M. as to the freedom of Western cattle from the disease."

Dr. Alexander Burr, Veterinary Inspector at Brighton (Boston) abattoir, gives the following table in his report to the Boston Health Department:

CLASS OF ANIMALS.	Number	Tuberculosis	Per cent
1. Whole number of all kinds.....	28,296	54	0.19
2. Cows from Eastern States.....	1,153	52	4 5
3. Oxen.....		1	
4. Western cow.....		1	
5. Old cows sent to the dead house which have died in the city and its neighborhood.....	116	12	10.3

Dr. Burr comments as follows:

"From the foregoing table it will be seen that only one Western animal showed any lesions of tuberculosis, and this was a fine large heifer dressing 835 pounds. This animal was condemned. The above table presents features of very great interest to the people of Boston, for it shows a condition of the cattle that ought to receive prompt and careful attention. When the cattle of the United States are considered, the percentage of tuberculosis is found to be very

small; when the cows from the Eastern States are examined, a more serious state of affairs is exposed; but when the condition of the old, unthrifty cows in the city and neighborhood is studied, and the class of people to whom their milk and other products are distributed are taken into account, the subject becomes a serious one, and well worth the immediate attention of our health authorities."

Facts like the foregoing, coming as they do from such high authorities, are sufficient to prove the necessity of meat inspection in every Eastern State, even if no other disease is considered.

But it must be remembered that tuberculosis is but one of the numerous affections that condemns an animal for human food; and because Western cattle are comparatively free from tuberculous affections, it must not be thought that they are all necessarily free from other diseases and conditions which may unfit them for human food.

As a matter of more than ordinary interest, two of Dr. Burr's tables are taken from his report of inspection at the Boston Abattoir, covering the year ending Dec. 31st, 1890:

TABLE I.—*Animals Killed and Condemned.*

Class of Animals	Number Killed.	Condemned	Weight of Condemned Meat.
Cattle.....	28,296	33	25,667 pounds.
Calves.....	37,133	50	1,585 pounds.
Sheep.....	491,406	12	500 pounds. 1,000 pounds of liver.

TABLE II.—*Diseases Found Among Animals Condemned after having been Killed and Dressed at the Abattoir.*

Diseases.	Cattle.	Calves.	Sheep.	Remarks.
Tuberculosis.....	17			
Anthrax.....	4			
Septicæmia.....	3			
Texas Fever.....	2			
Enteritis.....		2		
Immatured ..		48		
Decomposed.....	2			
Bruised.....	4		12	Principally injuries received during transportation

The following extract from the Report of the Health Department of the City of Boston, for 1890, explains itself:

“The inspection of live animals and dressed meat at the abattoir has been well done by Dr. Burr. More and better work has been done in the last twelve months than in any previous year. The need of professional inspection of animals and meat at the abattoir, for the detection of diseased and unwholesome conditions, is becoming more and more apparent as the true nature of the diseases among domestic animals, and their communication to man, are made known by scientific experiment.”

The writer is indebted to Dr. Burr for the Boston Manual of the Health Department, containing the Charter of the Brighton Abattoir, and the rules and regulations enforced by the Health Department under which the abattoir is conducted, and for personal letters giving all the details of the institution.

Dr. Burr says: “Our abattoir is run by a corporation under close directions of the City Board of Health; they (the corporation) rent their different buildings to the butchers, who, again, are under the said board.”

This corporation is chartered by the State under the name of the “Butchers’ Slaughtering and Melting Association.” The Charter, after regulating the business of the abattoir, says:

“Said Board of Health of the City of Boston is hereby authorized to appoint one or more inspectors, to see that the rules and regulations for the conduct of the business of the Association for the time being are fully obeyed by said Association and their tenants, and also to see that none but healthy animals are slaughtered; the salary or salaries of said inspector or inspectors to be established by the City Council of said City of Boston.”

Another section is as follows: “Said Board of Health of the City of Boston is hereby authorized to make whatever regulations may seem to them fit in order to prevent the slaughter and sale of animals unfit for human food.”

It is unnecessary to quote from the rules and regulations, as it is obvious that the Charter confers full authority on the Board of Health to make or change any rule or regula-

tion to meet any circumstance necessary to protect the public health.

Some butchers may consider as obnoxious the idea of having an inspector to overlook their work; but it should not be considered in this light, as a scientific inspector insures protection to the butcher as well as to the consumer of the meat.

In this connection I will again quote from one of Dr. Burr's letters: "I have found the butchers on more than one case, unconsciously to be sure, dressing advanced cases of anthrax, the dangers of which you know."

He further says: "The work of an inspector is not confined to the examination of meat alone; there are other duties, such as the collection of blood for foods, in the best sanitary ways; instructing the butchers in the proper way to dress injured animals, and those having minor troubles, for which you would not condemn the whole animal, such as localized abscesses, etc."

The more the facts are considered, the more apparent is the necessity and desirability of abattoirs and meat inspection. And when those who are most directly interested become fully acquainted with the facts, and cease to base their opinions on theoretical ideas, the mutual benefits derived from properly conducted abattoirs will be manifest.

It is the duty of every medical man to make proper use of the knowledge he undoubtedly possesses on this subject, for it is his duty, above all others, to prevent disease wherever and whenever it is possible to do so.

The writer has conversed with numerous business men on the subject, and the only objections urged against the project may be classed under two heads: 1st. That the cost of the necessary grounds and buildings would be too great for the city to attempt the enterprise at the present time. 2nd. That to compel the butchers to close up their slaughter-houses, and go to the abattoir to slaughter and dress their meat, would entail a loss to them which, in many instances, would be a real hardship.

The first objection may be disposed of in very few words.

It will cost the city nothing. Pass the law to establish the abattoir, and a joint stock association will soon apply for a charter to build and operate it.

To the second objection it may be said, that the butchers themselves may derive all the profits from the abattoir, as they are able to subscribe every dollar necessary to build and operate it.

As to the compulsory closure of their slaughter-houses, this does not seem to be much of a hardship, when it is taken into consideration that all, or almost all of them, are located on properties near this city, which would become much more valuable if the slaughter-houses were removed.

Now, as to the losses that will accrue on account of the condemnation of animals unfit for human food, it is only necessary to say, that the certainty of such food being sold is the main object of an abattoir; and when all animals must undergo a veterinary inspection, butchers will use every endeavor to avoid such losses, by exercising greater care in the purchase of stock to be slaughtered.

The income derived from the various sources of an abattoir is ample to make the enterprise a safe and profitable investment; but it must be borne in mind that it is the public health which is of paramount importance in the consideration of the question, and without a veterinary meat inspector, the health of our citizens would be as unprotected with an abattoir as without one.

A Physician's Good Name Must Not be Assailed.

In a recent case in Massachusetts, it was held that words spoken by a Catholic priest to his church, falsely, and with intent, to injure plaintiff in his profession of physician, instructing them not merely that a second marriage occurring under such circumstance as plaintiffs did, excommunicated from the Catholic Church, but that such marriage and excommunication should debar plaintiff from being employed by them, and that they could not have the ministrations of the priest in their sickness while the physician was under their roof, are actionable *per se* as touching the plaintiff in his profession, though they do not impute professional misconduct or incapacity.

Clinical Reports.

Successful Removal of a Pin from the Larynx.*

By F. T. CHAMBERLIN, M. D., of Washington, D. C.

PROFESSOR OF LARYNGOLOGY IN THE MEDICAL DEPARTMENT, UNIVERSITY OF GEORGETOWN; PHYSICIAN IN CHARGE OF DISEASES OF THROAT AND NEST SERVICE, AT EASTERN DISPENSARY, ETC.

On the evening of February 24th, 1889, Jessie L., white, age 17, came to my office with the history of having swallowed a pin. His statement was that about half an hour before while running up a flight of stairs with a pin in his mouth, by a sudden inspiration, it was drawn into his throat. He was very much frightened and seemed to suffer a great deal of pain; the voice was husky, and there was a troublesome cough, with slight, bloody expectoration. After examining the buccal cavity, I attempted an examination of the larynx with the mirror, but found the parts so sensitive that I could do nothing without anæsthetizing them, which I did with a 10 per cent. spray of hydrochlorate of cocaine. Having waited a proper time, I proceeded again to an examination with the laryngeal mirror, and located the pin as follows: The head was situated on the outer margin of the posterior commissure; the shaft extending upwards anteriorly, and the point penetrating the epiglottis to the extent of a quarter of an inch or more. The mirage of the pin in the mirror was as if a line were drawn from the posterior commissure across the anterior commissure to the epiglottis, dividing the larynx into two equal halves. I then proceeded to its removal, using Tüerk's laryngeal forceps and the laryngoscope. The first attempt was successful as regards catching the pin, but on attempting to withdraw it, I found the resistance more than I had expected, and the instrument slipped off. A second trial was more successful, however, and the pin was grasped just below the head, when a strong pull succeeded in dislodging it and in bringing it forth. The force used was sufficient to bend the pin at right angles, commencing from about its centre. The grating or tearing sound, produced by its dislodgment, was distinctly heard by a friend of the patient standing ten feet away. The length of the pin was $1\frac{1}{4}$ inches. The view of the larynx, immediately after its removal, showed only a slight wound of the epiglottis, where I had fully expected

* Read before the Medical and Surgical Society of District of Columbia.

to find the organ almost cut in two. The inflammatory symptoms quickly subsided, and there was no after trouble whatever; so the patient failed to put in an appearance the next morning as requested, and did not do so for nearly a week, when an examination showed the small wound in the epiglottis healed and the surrounding parts in a normal condition.

1404 *H. Street, N. W.*

Selected Cases from the Clinic of the Richmond Eye, Ear and Throat Infirmary. (I.) Removal of a Rabbit Rib from Œsophagus.—(II.) Removal of the Breech-Pin of a Gun from Nasal Cavity.

By JOHN DUNN, M. D., of Richmond, Va.

Removal of a Rabbit Rib from the Œsophagus.

On January 15th, 1891, the patient, a negro woman about 50 years old, while eating dinner, got a piece of rabbit bone in her throat, and all efforts to dislodge the same failed. The pain, whenever the patient would attempt to swallow, was severe, and for six days she took no food, except a little milk; and even the attempts to swallow this caused such pain that hunger could not force her to drink more. On January 21st, her physician brought her to the clinic. The patient then was very weak, and her features showed plainly the effects of her fast. She suffered acute pain in her throat, which she referred to a spot in the left side of the neck, about the level of the cricoid cartilage. No prolonged examination was made to see if the bone could be felt through the skin, as slight pressure in this region caused considerable pain. A horse-hair probang was passed, closed, without trouble, into the stomach; in withdrawing it, open, it was caught by the piece of bone and so firmly held, that I feared, for a moment, that the probang could not be withdrawn without severe injury to the parts about the bone. It finally came away, however, covered with mucus and streaked with blood. The bone remained in the œsophagus, and it was evident that one or both ends of it were more or less deeply forced into the œsophageal wall. The pain caused by the withdrawal of the probang must have been excessive, and it became a question whether a second passage of the probang would remove the bone or force it further into the wall of the œsophagus. It was, however,

again inserted, and it required an equal force to withdraw it. This time the bone was drawn into the pharynx, and the patient took it from her mouth with her fingers. Examination of the bone proved it to be the entire rib of a rabbit. It was $1\frac{3}{8}$ inches long, and the blood on the vertebral end of the rib showed that the probang had forced this end into the œsophageal wall for almost one-eighth of an inch.

This case suggests the question of advisability of passing the probang, open, down the œsophagus, in cases where we have reason to believe that the fragment of bone is nearer the stomach than the mouth, in order that the piece of bone may be forced into the stomach. It would be interesting also to know the further history of the injury to the œsophageal wall.

Removal of the Breech-Pin of a Gun from the Nasal Cavity.

On April 2d, 1891, Joseph Lipscomb, negro, aged 23, of Louisa Co., Va., came for treatment of abscess of the lachrymal sac. In 1888, a muzzle-loading gun burst while he had it at his shoulder, in the act of firing. The patient felt a pain in his right cheek, just external to the nose, and putting his hand to the place, found a hole into which he could insert his finger. While this wound was healing, which it took several weeks to do, the negro, finding the natural openings to the nose closed, was obliged to breathe through the hole in his cheek. This hole finally closed. Several months later, there formed in his cheek a huge abscess, which was treated in Baltimore. Later still, an abscess formed in the corner of his eye, and it was for this that he came to the clinic.

Examination of the face showed, on the left side, midway up the nose, a horizontal scar, about $1\frac{1}{2}$ inches long, extending from the nasal edge of the superior maxilla across the cheek. The lachrymal sac was full of pus, and insertion of a probe into it, the upper canaliculus having been split, showed that the lachrymal canal had been occluded by a bony formation. The patient carried with him an ozæna, the most penetrating and far-reaching I ever smelt.

Examination of the nasal cavities showed that considerable parts of the cartilaginous and of the bony septum were gone, while in both nasal cavities, some distance back, could be seen a large black mass, which gave the inner

nose the appearance of having its upper parts filled with balls of hardened, soap-covered mucus. I grasped one of these "masses of mucus," and it felt, under the forceps, like stone. I was able, with very little difficulty, to bring the smaller end of this "stone" out of the left nostril, when examination of it showed it to be metal. The large end, after coming forward about one and a half inches, became wedged in the nose and would come no further. With the use of some force, it finally came away, though not until the remaining anterior part of the cartilaginous septum had been considerably torn. The piece of metal proved to be the breech-pin of a gun, entire. It was covered with rust, making a formidable-looking occupant for the nose of man. It was $2\frac{3}{8}$ inches long. The screw-end measured $1\frac{3}{4}$ inches in circumference. The body of the pin measured two inches round. It weighed 495 grains. When the nose had ceased bleeding, the position in which the pin had lain could be plainly seen, as also the amount of damage done to the nasal bones. The breech-pin had entered screw-end first, at an angle of about 30° , to mid-plane of the face, the superior maxillary bone just below its nasal process; it had passed through the superior maxillary, and had gone into the nasal cavity, between the middle and inferior turbinates, passing, on its way, directly through the lachrymal canal. On striking the septum, the course of the pin had been so changed as to make an angle of about 15° with the septum, so that it had almost the entire resistance of the septum to its progress, and this resistance had been sufficient to stop the pin. The inferior turbinates, on both sides, were uninjured; both middle turbinates were swollen, and had been more or less lacerated; the septum, both above and below the place where the pin had rested, was greatly hypertrophied, and gave the appearance of having split so as to form a kind of trough, which supported the pin. The posterior rhinoscopic examination showed that the superior turbinates were uninjured, and that the pin had not projected into the post-nasal space, as the posterior edge of the vomer was intact.

Within two or three days after the removal of the pin, the ozæna had so diminished that it was necessary to be very close to the negro to be able to detect it. The only inconvenience of which the negro complained was that at times a profuse "discharge ran from his right nostril." It is a little surprising that the "piece of gun that could not be found" should not have been sought for in the nose.

Proceedings of Societies, Boards, etc

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[JAMES N. ELLIS, M. D., Reporter.]

June 2d, 1891, President Dr. Chas. M. Shields in the chair.
Anodal Diffusion.

In the paper read by Dr. D. A. Kuyk, he remarked that electricity, undoubtedly, is the wonder of the age, and is yet in its infancy. The phenomena of diffusion, as produced by electricity, are exceedingly complex, and he doubts if we have sufficient warrant to use the name *anodal diffusion* exclusively. For instance, iodide of potassium, if put on the negative pole or cathode, diffuses quickly through the tissues, and we find free iodine at the anode. How can we account for the phenomena involved? When we speak of anodal diffusion, we at once specialize too much, thereby contracting the utility of the very element for which we desire universal use and applicability. He therefore suggests the name *electrical diffusion*.

The idea prevails that diffusion is obtained only by means of the galvanic or continuous current, whereas the faradic, or interrupted current, certainly has the same power, though, perhaps, not so intense; and probably, by recent improvements and those continuously being made in the administration of Franklinic or static electricity, this change may be likewise affected. Here is a field for original investigation absolutely without limit.

As to *electro-physiology*, he said that the main obstacle to the passage of an electric current is the *resistance* of the substances through which it is sent. That of the skin is 300 times as great as that of all intervening tissues. When the current has passed through any body for a short time, the resistance rapidly diminishes. This is due, it is supposed, to increased hyperæmia and succulence of tissues permeated by the current, or to the electrolytic arrangement of the molecules in the track of the current. In this respect, the galvanic exceeds in strength the faradic current. Certain chemicals facilitate the transmission of the electric current, such as salt, and perhaps iodine, iodide of potassium, etc.

Electricity, applied to a certain degree or strength, stimulates the motor nervous system, increasing its action, hastening its circulation by its action on the muscular fibres of

the arteries, producing a temporary paralysis of the vasomotor nerves, as shown by the hyperæmia. The lymphatic system is also thus stimulated to increased activity. Indeed, all the normal functions become exalted, everything seeming favorable to a rapid absorption of whatever medication may be applied. Hence has arisen the utilization of the electric current, substituting a rapid, deep and complete absorption for the formerly slow, superficial and imperfect method.

The galvanic current is preferred because of its greater electrolytic action; the positive pole, because through it the current enters the body, though the catalytic action is greater at the negative pole. Again, acids and oxygen appear at the positive pole, and this, by the formation of readily soluble salts, may account for the diffusibility of drugs applied beneath it.

He quoted the opinion and experiences of a few authorities upon this subject. Wacksner, of Berlin, writing upon the "Effect of Electrical Induction Current upon Subcutaneous Injections," says, "It is evident that, by causing (immediately after injection) a series of strong muscular contractions and relaxations, an accelerated action of the blood-stream will ensue, and the foreign substance injected will be more rapidly absorbed and also more thoroughly. The muscular contractions are most effectually produced by means of the induction current. The most powerful muscles, such as the *gluttei* or *latissimus dorsi*, are selected for the injection; the skin over them having been previously moistened with a warm salt solution, the positive pole is placed near the point of injection, while the negative is stroked over the puncture."

A majority of medical electricians prefer the continuous or galvanic current.

In order to present a paper of absolute value, Dr. Kuyk wrote to some prominent men in this field of medicine, and quoted some of the replies.

Dr. A. D. Rockwell writes that "It is pretty well understood that pain is often greatly alleviated by the introduction of anæsthetic remedies into the system, by means of the galvanic current; and that effusions and glandular swellings are more successfully treated when certain medicaments are used upon the electrodes, I am inclined to believe.

"Electrolysis will sometimes entirely dissipate a goitre, for example, and will almost always reduce it more or less, and it becomes somewhat difficult to distinguish between

the simple electrolytic action of the current and the absorptive effect of the remedy introduced into the system. A case that lately came under my observation, however, made it pretty evident to my mind that the so-called anodal diffusion might be more valuable in these cases than has been believed. The goitre to which I allude had been treated only by external applications, as the patient would not consent to the introduction of needles. The first ten applications, administered in the course of six weeks, resulted in a marked reduction in the size of the tumor; but, although the treatment was continued for three months thereafter, twenty-five additional applications being made, and with increased current strength, no further reduction took place. It then occurred to me to use iodine in connection with the positive pole, although I attempted it with little enthusiasm, since in former cases I had been disappointed in its use. The result has been exceedingly satisfactory, although a greatly decreased current strength has been used. Six milliamperes has been the limit of the strength of current essayed in connection with the iodine treatment, while without it I frequently gave as high as twenty milliamperes. It is now six months since anodal diffusion was begun, and the applications administered by this method amount to thirty-six, and there is hardly a vestige of the tumor remaining.

"In the extraction of hairs by electrolysis, I have been accustomed to utilize the anæsthetic effects of cocaine, by the method of anodal diffusion. The upper lip is very sensitive, and the loose parts underneath the chin, and especially near the median line, and the pain is often unbearable. Anodal diffusion, with cocaine, ameliorates greatly the pain of this operation.

"I have also obtained good results from its use in the treatment of neuralgia."

Dr. Henry G. Piffard, of New York, says: "A good deal of misapprehension exists as to this matter of kataphoresis, and a recent article on the subject in one of the journals, tends rather to becloud than to simplify the subject. The inferences that the reader would naturally draw from the article in question are, first, that the medicated solution should always be applied to the anode or reophore supplying the positive current; and, second, that certain salts, such as the hydrochlorate of cocaine, iodide of potassium, etc., are diffused directly into the system by means of the electric current. There is no evidence whatever on which

to base these assumptions. Salts in solution are electrolysed or decomposed by the galvanic current, and acids, oxygens, and alkaloids seek the positive, while alkalies and basic bodies seek the negative pole. Clinical experience agrees with theory, and shows that, if the anode be moistened with the hydrochlorate of cocaine, the physiological effects of the drug will be manifested. In this case, the hydrochloric acid remains at the rheophore, while the basic cocaine penetrates the skin, which, in this case, acts as the negative. If, however, we desire to obtain the iodine effects from the iodide of potassium, the cathode—not the anode—should be moistened with the solution.

“The possibility of cataphoresis has been denied by some, but the writer’s experiments, made many years ago, satisfied him not only that many drugs could be introduced in this manner, but also that the method had little practical value. Anæsthesia by the ‘anodal diffusion’ of cocaine, may prove a novelty to the patient, and impress him accordingly; but a few drops of the solution injected with a hypodermic syringe will answer all practical requirements in the great majority of cases.”

Dr. Wm. James Morton says: “You will find in the *New York Medical Journal* of April 25th, 1891, a short article by me, which may give some suggestions, and render needless my writing now in full. I have brought out in that article several new points—viz: 1st. Anæmic cataphoresis; 2nd. Simple cataphoric plaster; 3rd. A simple and new electrode, conducting on both sides; and 4th. The method of employing the medicine on *both* poles.

“I do not believe the term ‘anodal diffusion’ is a good one. It does not seem to me to cover the entire ground. True, there *is* anodal diffusion. But granting that, we must also grant kathodal diffusion, for the migration of the ions in all electrolytes takes place in *both* directions. That is why I say, in practice, put the medicine on *both* poles; though, if one cares to be more accurate, he could select his medicines appropriate to either pole—that is to say, in some cases. This, I think, would only be a refinement, which, in the present state of cataphoric medication, would lead to needless confusion.

“Of course, our views as to what takes place in the intrapolar region in cataphoresis and electrolysis are mainly hypothetical. At the poles themselves it is otherwise. There we *know* that the respective constituents of a binary compound, the ions from an electrolytic point of view, bump

up, so to speak, against the faces of the electrodes, and collect there. The fluid has constituted an electrolytic circuit and necessitated electrolytic conduction; the metals of the electrodes, on the other hand, necessitate metallic conduction, and the moving elements in the fluid cannot climb along a wire; therefore, they are arrested where metallic conduction begins.

"Now, since the field of action, in cataphoresis, is from metallic face to metallic face of each electrode, and the fluid which is in action is not only the part of the body included, but quite as much the particular fluid medicine on the absorbing surfaces of the electrodes, it follows that we have a compound electrolyte; and that to properly understand and apply the method we must study it, not alone and simply from the mechanical point of view of electrical osmose or cataphoresis, but also from the point of view of electrolysis and electro-synthesis.

"I can, perhaps, make my position, that the process is chemical, electrolytic, and not entirely mechanical or cataphraic, clearer by two statements quoted from Logge:

(1st.) "Electrolytic conduction is invariably accompanied by chemical decomposition, and, in fact, only occurs by means of it.

(2nd.) "The electricity does not flow *through*, but *with*, the atoms of matter, which travel along and convey their changes something after the manner of piet balls."

"There is one point to which I might call your attention. This is the slow rate of travel of atoms through water, under a propelling electro-motive force of one volt per linear centimetre. Hydrogen travels at the rate of 1.08 centimetre per hour; potassium, at the rate of 0.205 centimetre per hour, and so on. This would indicate that ample time should be given to get full cataphoric effects.

"I am about to make some new experiments as to the efficacy of the Franklinic interrupted current of the electrostatic machines to carry medicines through the skin. My experiments with such currents thus far have not given me noteworthy results."

In the article referred to by Dr. Morton, he describes his method of "anæmic cataphoresis," by which he claims to localize the effect for that part alone for which it is intended. He cuts off the blood-stream from the part to be treated by an Esmarch's bandage or a rubber ring, or when these cannot be applied, the same result is accomplished by compression with the narrow edge of a disc-shaped electrode.

He uses medicated plasters in measured dosage, thus rendering special electrodes unnecessary. He finds his method especially serviceable in gouty and rheumatic joints. He quotes the case of Dr. Lewis A. Sayre, whom he has treated by this method, the swelling at his wrist-joint having been reduced one-half an inch; the pain disappeared, and considerable movement obtained where, before, there was none, and all of this accomplished within a few days. Nothing, up to this time, had done as much.

Nitro-Glycerin for Neuralgia and Physical Depression.

Dr. Jno. N. Upshur said that he had been sent for recently to see a woman, æt. 35, whom he found suffering from acute diarrhœa, rapidly going on to dysentery, with a neuralgic headache, insomnia, irritable stomach, and great depression. The bowels were controlled by enemata. On account of the depression and irritability of stomach, the administration of such analgesic remedies as phenacetine, antipyrine, etc., was not considered advisable; so he determined to employ and observe the effects of nitro-glycerine. One one-hundredths of a grain was given 11.58. In three minutes its effect, as manifested by increased tension of pulse, could be positively identified. In two minutes more, she expressed herself as greatly relieved, and experienced a desire to sleep. By ten minutes past twelve (twelve minutes since the administration of the remedy), the patient was comfortable, and the doctor left, leaving an additional dose with the husband with instructions to administer if there should be a return of the depression or headache. When seen this evening, there had been no recurrence of these distressing symptoms, and consequently no occasion for a repetition of the dose.

Erysipelatous Inflammation Following Vaccination.

Dr. Upshur also spoke of an erysipelatous-looking inflammation following vaccination (upon the leg of a girl-baby one-year old) with bovine virus. This was regarded as an erythematous inflammation, as the edges were not as well-defined as occurs in erysipelas; and under the application of a solution of cocaine in cherry water, disappeared from the area first involved, but extended above the knee, which became tense, shining, and œdematous, and below to the foot. The local application was kept up, and bicarbonate of soda, and Fowler's solution given internally, and it finally disappeared entirely.

Another child in the same family was similarly affected,

the inflammation culminating in a large abscess in the op-liteal space which was opened. Four other children had been vaccinated about the same time with the same virus, and none of the others experienced any untoward effects. The doctor is inclined to attribute his trouble in the cases above mentioned to some vice of family constitution.

Malarial Gout Developed by La Grippe?

Still another case reported by the doctor was that of a man 52 years of age, who had been in good health until the latter part of January, when the speaker was called to see him. He seemed to be suffering from the group of symptoms recognized as constituting "la grippe," and improved under the usual treatment for this trouble. Upon returning from an absence of a few weeks from the city, the doctor found that the aching pains had become intensified, and assumed the characteristic of gout; and the patient was put to bed and treated accordingly. Then followed a typical malarial attack, with chills and fever every other day, intense headache and delirium. There was nothing abnormal in connection with the urine, liver, or lungs. The tongue was red and dry in the beginning, but is now white and dry. Appetite poor, and the patient is not seeming to improve. He is now taking five grains of salol and two of antipyrin two or three times a day, with Valentine's Meat Juice, milk and whiskey. Took large doses of quinine when the malarial element seemed to predominate without relief. Suspecting some trouble about the nerve centres at one time, he was also given a course of the hypophosphites. There is no history or other evidence upon which to base a suspicion of syphilis. The doctor thinks his patient began with an attack of grippe, complicated by intense malarial poisoning and gout, and asks for suggestions in regard to diagnosis and treatment.

Dr. J. S. Wellford thinks that the failure of the quinine to be followed by relief, excludes the question of malaria, as he considered that drug a specific in malarial troubles. He is of the opinion that the doctor has to deal with a case of obscure gouty affection, possibly involving the membranes of the brain.

Extroversion of Bladder, Congenital Absence of Vagina and External Organs of Generation.

Dr. James N. Ellis reported a case of extro-version of the bladder, with congenital absence of the vagina and external organs of generation, that came under his observation as

physician in charge of the Surgical Department of the City Dispensary. The posterior wall of the bladder was seen as a red mucous surface between the umbilicus and pubes, somewhat elliptical in outline, with two small tit-like projections near its centre corresponding to the opening of the ureters from which the urine was discharging drop by drop. In the absence of anything resembling a penis or testicles, it is assumed that the child (3 years old) is a female; but on account of her tender age no attempt was made to determine the existence of a uterus. The general health and nutrition of the child seem good, and she is bright, pretty, and intelligent for her age. The inconvenience otherwise resulting from the constant dribbling of the urine, is obviated by the use of cloths, that are replaced when saturated. The formation of an artificial vagina for the exit of the menstrual flow will be necessary at puberty, but until then, operative interference promises but little relief.

Dr. John N. Upshur saw a case of *extroversion of the bladder* in an adult male when a student at the University of Virginia. The testicles were normal and the penis well developed, but the urethra was cleft, exposing its bare mucous membrane back to the point at which it disappeared in the scrotal tissues. His sexual instinct was unimpaired, and he frequently suffered from violent erections.

Retroflexion of the Uterus with Adhesions—Operation or no Operation?

Dr. W. W. Parker referred to a case that he had reported some time ago, in which the uterus was retroflexed and bound firmly down to the sacrum by inflammatory adhesions following child birth. He was then considering the advisability of operative interference, but in the meantime had been giving her hot vaginal douches, with suppositories of iodine and opium, and tonics internally. Under this treatment the pain has ceased, but the womb remains immovably fixed. He now questions the advisability of, or the necessity for an operation.

Dr. D. A. Kuyk saw a similar case successfully operated on in New York some years ago.

Dr. J. S. Wellford does not think an operation promises relief if the adhesions are the result of peri-uterine inflammation.

Dr. Jno. N. Upshur suggests that before resorting to the knife, the patient be put upon the iodide of potassium internally, and that the vaginal walls be painted every other day with Churchhill's solution of iodine, and the use of hot

douches and glycerin tampons daily. He cited the case of a patient whose uterus was tightly bound down as a result of cellulitis, with intense pain upon the introduction of the speculum, and a fluctuating tumor in the Douglas' cul-de-sac. He punctured the tumor, giving egress to a dark, sanguineous fluid, but no pus. Under the above treatment, with alkaline baths twice a week, the womb was finally found to be perfectly free in the pelvic cavity. She had never menstruated with regularity, but a slight flow followed a forcible dilation of the cervix, ceasing, however, when the os subsequently contracted. He then made a posterior section of the neck of the womb, and she is now comparatively well, with the exception of an obstinate amenorrhœa.

July 7th.—Dr. Hunter McGuire spoke from notes on

Cataphoretic Treatment of Goitre by Iodine ; of Chronic Orchitis ; of Uterine Fibroids, etc. [See page 384.]

—Dr. Chas. M. Shields continued the discussion by reporting some cases of fibro-cystic goitre that he had treated with simple electrolysis. In these cases the tumor was not penetrated with the needle electrode; but the ordinary sponge electrodes were placed over it. The constant current from a wall cabinet battery was used, and about fifteen to twenty-five Leclanche cells employed. The sittings were from three days to one week apart, and the electrodes were kept in contact with the growth from ten to twenty minutes at a time, or as long as the patient could stand it without the skin being blistered.

In fibrous goitre Dr. Shields did not expect a great deal from electrolytic treatment, although he had always obtained some diminution of the growth; but in the form we are most frequently called on to treat—the fibro-cystic variety—he had invariably gotten good results. He reported three cases of complete cure, one of which well illustrated the advantages of electrolysis as compared with the usual methods of treatment. This patient, a man aged about 30, had been under constant treatment for about five years before this method was used. He stated that in that period not a single day had passed without his having taken some absorbent medicine; applying some absorbent locally or having it injected or blistered. In spite of this constant treatment for five years it continued to increase in size and density. The electrolytic applications were made twice a week at first, then once a week, and continued for several months with the result of complete absorption. Dr. Shields

believes that in electrolysis we have a most satisfactory method of dealing with goitre.

Dr. W. S. Gordon said that he had obtained good results in a case of cystic goitre from the use of Lugol's solution until iodism was induced. The diminution was decided but not complete when the patient was lost sight of. He had, however, succeeded in completely dissipating a fibrocystic goitre by the means above mentioned. He cites these two cases to show that absorptives alone, without electricity, are sometimes efficient.

Dr. Landon B. Edwards reported two cases of forming goitre in females—one a lady of about 18 and the other about 35—which he had cured by local applications of iodine. He directed that an impervious material, such as oil silk, be worn as a collar over the applications of tincture of iodine, so as to prevent, as far as practicable, the dissipation of the iodine. In both cases, he made a few hypodermic injections into the goitres of about a half grain iodine dissolved in a weak solution of iodide of potassium. He remarked upon the benefit of the combined use of the cataphoretic treatment by iodine, and keeping the surface over the goitre well painted with iodine. Iodinism has not been reported as a result of such plan of treatment.

Dr. M. D. Hoge, Jr., said that he had suggested to a dentist that the use of cocaine by anodal diffusion might be successfully employed to diminish the pain incident to the extraction of teeth. The instrument used was a small piece of cotton saturated with a ten per cent. solution of cocaine, which was held in a cup-shaped appliance and placed successively on each side of the gum opposite the tooth to be extracted. It took from three to five minutes (depending on the strength of the current) for complete anæsthesia to ensue. The tooth was then extracted without pain.

Another possible use is in cases of fatty degeneration of the spinal cord. Why could not an alkali be introduced by means of anodal diffusion, and, penetrating to the degenerated tissues, make an emulsion of the fatty products?

Dr. Hunter McGuire, replying to questions and closing the discussion, said that the local anæsthesia from the anodal diffusion of cocaine lasted sufficiently long for operative purposes. When iodine is used, if the application is long continued, or the current of sufficient strength, a blister will result. He has never used pure iodine, but always the tincture, and does not know if the electricity conducts it into the tissue as a vapor, or in solution. He has used

anodal diffusion in a great number and variety of cases not mentioned above, and is convinced that its field of usefulness is a wide one. If, as is supposed, it is an agent that will conduct a medicament into the tissues and bring it into intimate contact with the neoplasm, may we not reasonably hope, with its assistance, to so modify the cancer-cell as to abort a beginning growth?

Analyses, Selections, etc.

Cure of Leprosy by Gurjun and Chaulmoogra Oils.

Dr. J. C. Phillipps, of Jamaica, West Indies, last year communicated to the Epidemiological Society of London (*N. E. Med. Monthly*, June, 1891,) notes of a typical case of the nodular dermal or hypertrophic form of leprosy in a young man. In 1872, while sea-bathing, his left great toe was cut, and did not heal for three or four months. Six months afterwards, the toe became swollen and black, and the cut re-opened. Poultices and lotions got the toe better, minus the nail. The cut, however, opened about every six months, but yielded to treatment. In 1874, a scaly appearance round the ankle began, and the cut, which opened again, was very stubborn. In January, 1875, it re-opened, and the scaly band round the ankle was broader. Cashew-nut oil was applied with benefit. Late in 1875, the cut re-opened, and afterwards generally so remained. In 1876, the hands lost their natural size, and the hairs on the left leg withered. Late in 1877, the left ear enlarged, and the scaly band round the ankle began creeping up the leg. By February, 1878, general health became so bad that a month's change to the mountains was advised, but without good. His face became puffed and spotted. After this, the toe would not heal; health became worse, fever set in, and the patient (early 1879) could not walk. Ulceration increased, toe enlarged and spread over the second toe, which also ulcerated, with loss of nail. The left foot also swelled very much; on several fingers were small ulcers, and a nail was gone. Ears—particularly the left—very much enlarged; nose and lips swollen, and his face was very much disfigured. Spots developed on several parts of his body. The great size of his left foot made him move about with great difficulty, and he became very nervous.

In September, 1879, Dr. Phillipps prescribed gurjun oil

(prepared with lime water), to be rubbed in, over the body, hands, face, etc., twice daily, bathing before each application. The washing off was done with sapolio. The rubbing was done by the patient himself so as to get the exercise. The oil was also applied as an ointment to all swellings and ulcers; and when renewing it, cashew-nut oil was first applied and allowed to dry in. A tablespoonful of gurjun oil, prepared with a smaller proportion of lime water, was taken internally morning and evening. For an hour or two after rubbing in the oil, there was a pricking, warm sensation all over the body. From 1880, the fever was accompanied by outbursts of lumps and eruptions on the fingers, toes, legs, and even face; and these would discharge plentifully, like the older enlargements, which became gradually smaller, and disappeared. He was worse until late 1881, when he was very weak, and could not stand. Sometimes, he had pains in his knees. Nails all gone, as also hair on legs, arms, eyebrows, etc.

Then chaulmoogra oil was substituted for the gurjun oil internally, but rubbing with the latter was continued. Improvement began in the face—the lips, ears and nose gradually becoming natural before 1882. Spots about body disappeared; the hands got better; the left foot, especially the great toe, was the last to yield. Outbursts continued after the enlargements disappeared, but were less severe each time until they ceased. From 1882, gurjun oil was rubbed in only once a day. Treatment, with some intermissions, was kept up till January, 1886, when he was *cured*. For five years past he has had no return of the trouble; his strength has steadily increased; health improved, and even the hair and nails have been coming back; even the eyebrows are slowly growing.

Dr. Phillipps thinks the cause of failure of these remedies is due mostly to the fact that patient, nurse and doctor weary of their use before they should. It takes years to cure a leprosy. This case is important as illustrating that fact, and it is specially useful as indicating to Americans, among whom the disease has threatened to develop, that it has a cure.

Chronic Prostatitis.

Dr. Oberlaender, of Dresden, says (*Jour. Cutan. and Genito-Urin. Dis.*, July, 1891,) that beside the “so-called old man’s hypertrophy,” there are other forms of chronic prostatitis that do not come in the late years of life, which last long and cause a host of troublesome symptoms. In many

the cause is an old gonorrhœa; in others, excesses in venery and wine, masturbation, etc.; a predisposition to catarrh of the mucous membranes, especially of the genito-urinary tract, also plays a decided role; there is, besides, a certain hereditary influence in many cases, as, for instance, has long been established in the "so-called old man's hypertrophy of the prostate."

Coitus reservatus or *interruptus*, when in excess and long continued, belongs to the most harmful of sexual practices. This may call forth and keep up for years severe as well as slight general nervous and genito-urinary disturbances. The local annoyance of this form of chronic prostatitis is often slight—increased urgency and some burning on urinating, especially after excess in diet; frequently these patients suffer a very disagreeable nervous weakness of the sexual power. Erections may be increased or diminished; but, at the critical moment, they are either too weak or do not exist at all; often *ejaculatio præcipitata* takes place, and great bodily and mental exhaustion follow cohabitation. The urine contains mucous threads which, microscopically, are seen to be epithelium, prostatic bodies, spermatozoa, and small particles of strongly refractive detritus. Examined *per anum*, the prostate is usually more or less irregularly enlarged; as a rule, only one lobe is affected, and can be felt to be soft and uneven; the swelling is seldom or never hard. Here and there are distinct painful points which cause painful sensations of pressure in the rectum and perineum, as well as painful twitchings after coitus or pollutions. Sometimes, pressing on the gland causes a drop of prostatic fluid to escape per urethra, which, under the microscope, shows prostatic bodies, and, by the addition of one per cent. solution of ammonium phosphate, sperma crystals. The urethroscope reveals decided posterior urethritis—especially about the colliculus seminalis. The mucous membrane is either decidedly red, bleeding very easily, soft and covered with soft granulation-like and papillomatous growths; or on the surface it is smooth, and on passing the tube over it, it becomes yellowish-white and shiny. The first form is far more amenable to treatment.

As to treatment, rest in mountains or at seaside, proper nourishment, and regular movements of bowels by clysters, or mild cathartics, are important. Camomile or valerian clysters, as well as camomile tea and sitz baths, allay the pains. Iodoform suppositories relieve the feeling of pressure in the rectum due to enlarged and painful prostate, as

well as the sensitive urethra. The iodoform should be prepared so as to be quickly taken up in the rectum. Hence—

R.—Iodoform.....grs. vii to xv.

Ol. amygdal. dulc....q. s.—Ut fiat solutio stabilis.

Butyri cacao..... ..q. s.

Misce.—Divide in suppositoria decem.

Give a clearing-out clyster before introducing a suppository. Introduce one each night on going to bed. If this does not prove sufficient, increase the dose of iodoform from a grain or more to fifteen grains if necessary. Iodoform intoxication occurs in sensitive persons after the use of larger rectal doses than fifteen grains. The milder doses do no harm, and act exceedingly well. A marked beneficial effect results after a few weeks' (or possibly days') use of iodoform suppositories. Iodide of potassium irritates the mucous membrane, and its use must be discontinued.

A one or two per cent. solution of nitrate of silver to cauterize the posterior urethra, once or twice a week, is harmless when used with proper precautions. The introduction of large metallic sounds often acts well. Winternitz psychrophor, especially when used in the subsequent relaxation of the muscles of the posterior urethral sheath, also gives good results. Bleeding after the first applications of the cautery, or introduction of the larger bougies, has no significance so long as one is conscious of not having wounded the normal canal. Relapses are frequent, but the disease should not be reckoned among the incurable because of this fact. Cases that develop from a gonorrhœal base get well quickest and best. The worst cases occur in those predisposed to catarrhs, and in those who suffer from chronic intestinal, respiratory, and nasal catarrhs.

Health Legislation.

The legislation enacted during the past year on the important subject of the public safety, has been summarized in a very interesting manner by a prominent lawyer as follows: "Numerous enactments in fifteen States, designed to protect the safety, health, and morals, illustrate the exercise of the 'police power' so strongly denounced by the extreme disciples of Herbert Spencer, and the *laissez faire* school, and the constitutional limits and application of which, have become burning questions of the day. Michigan, Iowa, South Dakota, West Virginia, and Washington, impose severe penalties upon proprietors of coal and other mines, who fail to guard against dangers and accidents of

various kinds, and upon persons committing wilful or malicious injury to any apparatus connected with their working. Kentucky, Massachusetts, West Virginia, South Dakota, and Wyoming, make further detailed provision for the official inspection of mines, and investigation in case of accident.

The dangers from fire in hotels, factories, schools, theatres, and other buildings, where many persons congregate, are met by various stringent regulations in Rhode Island, Virginia, Massachusetts, Georgia, and New Jersey, requiring suitable appliances for escape. Massachusetts makes stringent provision for the regulation and supervision of electric wires in cities, including their proper insulation, the removal of all abandoned wires, and a valuable provision that to every such wire, at the point of support, shall be affixed a tag or mark distinctly designating the owner or user.

Michigan prohibits, under severe penalties, the concealed transportation, or the careless use of dangerous explosives.

In Virginia, the destruction by dynamite or other explosive of any dwelling, if at night, or endangering human life, is punished with death; being otherwise a penitentiary offense, as is the destruction by like means of any public building warehouse, or manufactory.

Ohio requires druggists, selling poisons, to affix to each bottle a red label, not only warning of their character, but naming at least two of the most ready obtainable antidotes.

Michigan forbids the confinement of any person alleged to be insane in any public or private asylum, except under a commitment from a probate judge, based upon the certificates of two reputable physicians appointed by him, given under oath."

Elevation of Pelvis to Relieve Vomiting of Pregnancy.

Sir James Grant, M. D., of Ottawa, Canada, says (*Montreal Med. Jour.*, June, 1891, quoted by *College & Clin. Rec.*, July, 1891,) as a last expedient to relieve a primipara of exhaustive vomiting of pregnancy, he lowered her head and thorax by placing several pillows under the sacrum—thus elevating the pelvis. In a short time, the change was encouraging; and by continuing the position at intervals for a few hours, marked improvement was evident in two days, and she went to full term without return of the inordinate vomiting. He has now used the plan in several cases with equally satisfactory results. As to the *rationalé*, elevation of the pelvis gradually lessens the quantity and force of the blood in the uterine vessels, thus reducing the quasi-irritability of the nerve-elements in the uterine nervous system.

Poison for Sparrows.

The Massachusetts State Board of Agriculture is in favor of the extermination of the English sparrow by poison, and recommends to the Legislature a change in the law, "so as to allow the use of poison in the winter months, when none of our insectivorous birds would be in danger of being destroyed by it. It is feasible to expose poison for sparrows in winter time in such ways as to be without danger to other birds or to animals. The Board do not approve of the offering of a bounty for the killing of sparrows; but if a bounty for dead sparrows should be proposed, this Board believes that it should be limited to such sparrows as are killed in the winter."

Book Notices.

Origin, Purpose, and Destiny of Man; Or, Philosophy of the Three Ethers. By WILLIAM THORNTON, M. D. Boston: Published by Author. 1891. Cloth. 12mo. Pp. 100.

The author's idea is to explain the method adopted by which he arrived at the conclusion that a science of medicine could be founded with mathematical precision. His observations have led him to conclude that all things—animate and inanimate, organic and inorganic—are made up of three states, which he calls "the three ethers, namely, Life—a continuous aggregate; "a composition of the potentialities heat, light, electricity, and magnetism—mechanical power being manifested during the activity of these potentialities;" and third, "a material nucleus which permits of the action of the other two ethers." The work is a philosophical one—readable and suggestive all the way through; but its deductions prove a little too much, and hence it must be concluded that there is an error somewhere.

Transactions of the New York State Medical Association for the year 1890. Vol. VII. Edited for the Association by E. D. FERGUSON, M. D., Troy, New York, Secretary. Cloth. 8vo. Pp. 634.

This handsomely issued volume, rich in valuable papers, and well indexed, contains the proceedings of the meeting

of 1890. This Association adopts the excellent plan of announcing a subject, and appointing leaders for the discussion of each of the several important questions arising in its consideration. For instance, "Intra-Cranial Lesions," was one of the subjects. Dr. W. W. Keen, of Philadelphia, led off in some pertinent introductory remarks. Drs. Jas. J. Putnam, of Boston, and Joseph D. Bryant, of New York, N. Y., spoke on the "Means of Localizing" such lesions. Dr. Chas. M. Mills, of Philadelphia, after reviewing some of the means of localization, etc., discussed the nature of the chief lesions (hæmorrhage, abscess, tumors), and how to discriminate between them. Dr. Frederick S. Dennis, of New York, spoke on the same subject, enumerating hæmorrhage, pus, bone and foreign bodies, tumors, softening, embolism and thrombosis, epilepsy, and intra-cranial pressure from fluid. Dr. Charles Phelps, of New York, spoke on central lesions. Dr. John B. Roberts, of Philadelphia, discussed the indications and contra-indications of operation, the best modes of operating, and the immediate and remote results of operation. Dr. Thomas H. Manly, of New York, N. Y., also spoke on the immediate and remote results of operations. Thus it will be seen that the discussion in itself makes a most excellent monograph on the subject in general.

Transactions of the Southern Surgical and Gynæcological Association. Vol. III. Third Session held in Atlanta, Ga., November 11, 12, and 13, 1890. Cloth. Gilt top. 8vo. Pp. 444. (Dr. W. E. B. Davis, of Birmingham, Ala., Secretary.)

We take occasion to announce the issue of these *Transactions* because of their standard value to surgery, gynæcology, etc. Our subscribers had an opportunity to judge of the authoritative merits of the papers contributed to the volume from the full synopsis given of most of them in our issue for December, 1890. The Association is select in its membership—representing mostly those who have some special reputation in the department of surgery or gynæcology, while several of its members are men who have won world-wide renown. The success of the Association has been greatly due to the careful selection of its efficient officers; but to none of them so much as to its able and efficient Secretary—himself a surgeon of celebrity.

Editorial.

Subnormal Temperature Succeeding La Grippe.

Dr. Thompson's article in this issue calls attention to a point in the history of la grippe, as recently observed in Texas, that we fear has not been sufficiently noted by those who have written on the subject, namely, the *subnormal* temperature of the patients about the fifth day after the attack begins. Now that the epidemic in this country seems to be about over, we do not know that this observation can be satisfactorily tested. But in the record of those who may furnish chapters on the subject to works on Practice of Medicine, it is worth while to call their special attention to it. It may be as the key unlocking some fact which will more satisfactorily explain the utter prostration of every vital energy so generally witnessed in those who have recently had the disease.

Need for Meat Inspection by Veterinarians.

We wish to specially call attention of all our readers interested in meat diet health questions to the important papers contributed to the July and August numbers of this Journal by Dr. W. H. Harbaugh. The distinctions he has received at the hands of the U. S. Department of Agriculture for several years successively to inspect and report on diseases in cattle, horses, etc., coupled with his earnest scientific studies under specially favorable opportunities, give to his papers an authoritative merit. The facts he furnishes, the deductions he has drawn, and the conservative, yet positive suggestions he has made, should make all sanitary officers and health boards read these papers with attention, and lead them to take the necessary steps to require thorough inspection by veterinary experts of all stocks and meats that are to be offered for sale as food. Truly abattoirs, etc., under expert control should be required.

The Medical Examining Board of Virginia

Will hold its semi-annual session for the examination of applicants for license to practice medicine, surgery, etc., in Virginia, during the session of the Medical Society of Virginia in Lynchburg, Va., during October, 1891. Fuller notice will appear in our September number. In the meantime, for further information apply to the Secretary of the Board, Dr. Paulus A. Irving, of Farmville, Va., or the President, Dr. Hugh M. Taylor, of Richmond, Va.

Phenacetine and Paraphenetidine.

A recent item entitled "A Dangerous Impurity in Phenacetine," is likely, through various scientific and typographical traumatism, to give rise to misapprehension as to the perfect innocuousness of *phenacetine* as an antipyretic. In substance, this item states that Dr. Reuter, of "Heibzberg," had found a dangerous impurity, "paraphenacetidine," in phenacetine; that this was a residuum of the manufacture, and that it existed in the phenacetine of the "Baker Color Works." We are glad our special attention has been called to this matter in order that we may correct an error.

The simple facts seem to be that Dr. Reuter, of Heidelberg, refers in the *Repertoire de Pharmacie*, of May 10th, to an "interesting chemical re-action obtained by the use of chloral in the examination of impure phenacetine for traces of paraphenetidine." Dr. Reuter further says: "We meet in commerce with certain phenacetines which are not free from paraphenetidine * * * it is essential to administer to patients none but a pure phenacetine." But Dr. Reuter makes no allusion to the "Baker" or Bayer Color Works.

Paraphenetidine is a by-product of the manufacture of phenacetine. In the Bayer Works this is carefully eliminated. The testimony concerning the absolute certainty with which phenacetine-Bayer may be administered is so clear and conclusive, and so well known to American physicians, that it need not be repeated here. As Dr. Waugh has justly stated (*Times and Register*, September 20th, 1890:) "No case of poisoning from phenacetine is on record." With other American physicians, Dr. Waugh employed phenacetine-Bayer.

In the frequently-quoted case of Dr. W. C. Hollopeter (*Med. News*, September 21st, 1889), it is claimed that three doses of seven grains each of phenacetine, taken in six hours, produced in a woman with pelvic trouble severe precordial pain, great dyspnoea, lividity of the whole surface of the body and marked collapse. Consciousness was slowly restored by ammonia and alcoholic stimulation, although she could not well leave her bed for a week. But whoever quotes this case should not fail also to quote the other part of the statement that the patient had previously taken antipyrin and antifebrin in 15 grain doses four or five times daily without any characteristic effects *just prior* to her use of phenacetine.

The Medical Society of Virginia Session

In Lynchburg, Va., during October, promises to be a great success. Full announcement will appear in the September number. Several distinguished visitors promise attendance and participation in the proceedings, etc. Secretaries of State Societies, etc., sending fraternal delegates, etc., will confer a favor by immediately forwarding a post-office list to either the Corresponding Secretary, Dr. J. F. Winn, or Recording Secretary, Dr. Landon B. Edwards, Richmond, Va.

"American Men of Eminence"

Is the title of a pamphlet of great interest, issued by the Arlington Chemical Company, of Yonkers, N. Y., which will be supplied to physicians on application to that firm. This "Series No. 1" contains well-executed portraits of Horace Greeley, Henry Ward Beecher, Henry M. Stanley, Saml. F. B. Morse, Dr. J. Marion Sims, and Wm. Cullen Bryant, with brief biographical sketches of each. "Series No. 2" will be shortly issued, with pictures and sketches of others of prominence. The Arlington Chemical Company are the manufacturers of Peptonoids, of Phospho-Caffeine, and other well-tested and useful preparations.

The Mississippi Valley Medical Association

Will hold its Seventeenth Annual Session at St. Louis, Wednesday, Thursday, and Friday, October 14, 15, and 16, 1891. Reduced rates and excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows: C. H. Hughes, M. D., *President*, 500 N. Jefferson Avenue, St. Louis; E. S. McKee, M. D., *Secretary*, 57 W. Seventh Street, Cincinnati, Ohio; I. N. Love, M. D., *Chairman Committee of Arrangements*, 501 N. Grand Avenue, St. Louis, Mo.

Dr. Joseph Eastman, of Indianapolis, Ind.,

President of the Faculty and Professor of Diseases of Women and Abdominal Surgery in Central College of Physicians and Surgeons, has had the degree of LL. D. conferred on him by Wabash College of Crawfordsville, Ind.—an honor he richly deserved. We are glad to see members of our profession, who well merit such distinctions, receiving them.

Dr. G. Frank Lydston

Has been elected Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons of Chicago.

The Kentucky School of Medicine,

Out of a matriculated class of about 400 students for the session just ended, on June 18th, graduated 155 as doctors of medicine. This School has made a wonderful progress in numbers of students and in the spread of healthful influences as to the study of medicine.

Prize Essay for 1891.

Note advertising page 44 for instructions.

Dr. Hunter McGuire

Started July 14th, on an eight weeks' trip for Europe, arriving in Queenstown July 22nd.

Much Matter Prepared for this Number

Has been crowded out. It will appear in September number.

Obituary Record.

Dr. Thomas P. Gary.

At a called meeting of the Duval County Medical Society, in Jacksonville, Fla., June 17th, the following preamble and resolutions was unanimously adopted :

Whereas, It has pleased God in his all-wise providence to call from earth our late professional brother, Dr. Thomas P. Gary, of Ocala, Fla., who was at the time of his death, the honored President of the Florida Medical Association; and *whereas*, we find that it is our sad privilege, as well as our duty on this sad occasion, to give some token of the sincere grief with which we have been filled in hearing of Dr. Gary's death, as also to make formal expression of our appreciation of the loss which the profession has sustained thereby; therefore,

Resolved, That in the death of Dr. Thomas P. Gary, the Florida Medical Association has been deprived, not only of a dignified and able presiding officer, whose value has but recently been emphasized by a unanimous re-election to the office which he so ably filled, but the Association has lost likewise one of its most able as well as active members; that the professional brotherhood to which he belonged has been deprived of one who was ever ready to aid and pro-

mote their trust, interest, and noblest aims, and that his fellow citizens have been called upon to mourn for one, who, when in their midst, was ever prompt alike to put his shoulder to the wheel of progress, or open his heart and hand to those who sought his sympathy and aid.

Resolved, That we extend our sincere sympathy to his relatives and immediate friends in the loss which they more especially have been made to sustain, and we can assure them that their sorrow is ours likewise.

Resolved, That our Secretary be requested to send copies of this preamble and resolutions to the *Virginia Medical Monthly*, with a request to publish the same; and likewise that copies be sent to the Secretary of the Marion County Medical Society, and State Medical Association.

Dr. G. B. Dillard.

It becomes our painful duty to announce to this Society the death of a much respected and beloved member, G. B. Dillard, M. D., age 69. He was a descendant of one of the first families of Virginia. He was born in Spotsylvania county, Va., in 1822. After completing a literary course, he commenced the study of medicine, graduating from the Transylvania Medical College at Lexington, Ky., in 1842. Later he attended a course of lectures at the Virginia Medical College, in Richmond. He settled and commenced the practice of medicine near his home in the Shenandoah Valley, where he remained until two years ago, when accompanied by his estimable wife, he came to this city to spend the remaining years with his son W. P. Dillard.

During forty-one years he practiced medicine in a hilly country, where buggies and carriages could not be used. He had to use a saddle horse, principally, making his labors that much more arduous. During this period he enjoyed the respect and confidence of some of the most noted physicians, both in Virginia and Philadelphia, Pa. Devotedly attached to his profession, constantly seeking medical literature, he was well posted in medicine up to the time of his death. He was a close observer, blessed with an excellent memory, and was possessed of a fund of general as well as medical information, which made an hour spent in his company a pleasure to any one who might choose to listen. During the late War his home lay in the track of the contending armies—each trying to gain and control the Valley. Thus it not infrequently happened that in a single day he was alternately within the Union and Confederate lines.

During his residence in this city, Fort Scott, Kansas, the writer frequently enjoyed the presence of his company. His estimable wife preceded him only a few months—her death occurring last fall. His death, though expected by himself, as expressed frequently, yet came with a suddenness wholly unexpected by his friends. On April 5th, 1891, he was taken with a hæmorrhage, and death occurred before medical aid could reach him. A gentleman by birth and education, an ornament to our noble profession, an unsullied reputation and name. His death reminds us of those lines from Jeremy Taylor: "Death of the righteous is like the descending of ripe and wholesome fruit from a pleasant and florid tree. Our senses entire, our limbs unbroken, after provisions made for our children, with a blessing entailed upon posterity, in the presence of our friends, our dearest relatives closing our eyes, leaving a good name behind us." Of him it may be truly said, "Well done good and faithful servant; enter into eternal rest."

The following resolutions were adopted by the Bourbon County (Kansas) Medical Society at their regular monthly meeting in the city of Fort Scott, Kansas, Thursday evening, May 8th, 1891:

Resolved. That the Bourbon Medical Society received with profound sorrow the announcement of the death of Dr. G. B. Dillard.

Resolved. That in his death this Society has lost an honorable member, while we as individuals have lost a true friend and brother, as he was always willing to assist with cheering sympathy and advice whenever possible.

Resolved. That to know Dr. G. B. Dillard, was to love him as a friend, and admire him for his eminence in his chosen profession; and we do hereby extend to his children and brothers our most profound sympathy and grief for the great loss that has overtaken them, assuring them our sympathy goes out from our hearts in accordance with regrets and sorrow of a large circle of friends in whose love and confidence he had so earnestly and firmly endeared himself.

Resolved. That a copy of these resolutions be spread upon the minutes of this meeting, a copy sent the bereaved family, and a copy to the *Virginia Medical Monthly* for publication.

Committee: F. F. Dickman, J. B. Carver, and R. Aixman.
Fort Scott, Kansas, May 9th, 1891.

VIRGINIA MEDICAL MONTHLY.

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RICHMOND, SEPTEMBER, 1891.

Original Communications.

ART. I.—Some Observations on General Paresis.

By JOHN JOSEPH KINDRED, M. D., of Poughkeepsie, N. Y.

ASSISTANT PHYSICIAN AT THE HUDSON RIVER STATE HOSPITAL, ETC.

General paresis, besides being a variety of insanity, is a real cerebral disease, as different from other diseases as scarlatina is from rubeola, and has an intensely interesting pathology.

The study of this disease has served in great part to define the study of all mental diseases; and has added, and will further add, to our knowledge of mental and motor disturbances, and of the connection of mind and body.

The definition of the disease proposed by the great Scottish alinist, Clouston, Physician-Superintendent of the Royal Edinburgh Asylum for the Insane, is, "A disease of the cortical part of the brain, characterized by progression, by the combined presence of mental and motor symptoms—the former always including mental enfeeblement and mental facility, and often delusions of grandeur and ideas of morbid expansion and self satisfaction; the motor de-

ficiencies always including a peculiar defective articulation of words, and always passing through the stages of fibrillar convulsion, incoördination, paresis and paralysis; the diseased process spreading to the whole of the nerve tissues in the body, being as yet incurable and fatal within a few years."

To form a convenient basis for study, the disease is divided into three stages. The first or prodromal consists of fibrillar tremblings and some incoördination of the muscles of speech and facial expression, along with mental exaltation and excitement; the second, of still greater muscular incoördination and paresis, with more or less mental enfeeblement; and the third, of advanced paresis, or no power of progression, almost inarticulate speech, and at last paralysis with mental extinction.

The first, or prodromal stage, is very variable in its duration; while usually extending over many months, it is often prolonged over a much longer time. The duration of the disease, including all three stages, is, on the average, about three years.

Many of the symptoms of the first stage may be trivial when considered by themselves; but some, on the other hand, are of the most serious import. Among such symptoms introducing the first stage are ordinarily, more or less muscular incoördination, and an unnatural super-abundant activity and restless energy of body and mind; a feeling of extreme mental exaltation and *bien être*, often, however, alternating suddenly into the opposite extreme of the most despondent melancholy and emotional outbursts. Added to this exalted mental and bodily energy, for which there seems hardly any adequate relief, there are extravagant waywardness, fickleness, unjustifiable outbursts of terrible passion and irritability, which will not brook control—all these occurring in persons originally self-controlled and amiable. Friends soon notice a growing change in character, marked by perversion of any or all of the moral sentiments, constituting valuable evidence from a medico-legal standpoint. The moral perversion may manifest itself in

so many ways that the unfortunate subject, particularly if he is among the lower classes of society, often falls as a criminal offender into the clutches of the law, being held legally responsible for various moral lapses and offenses committed while totally irresponsible and suffering from mental alienation in this early period of the disease.

Officers of State hospitals for the insane frequently have their attention brought to this state of facts by being called upon to receive many such cases from the prisons, where they have languished after trial and conviction for drunkenness, theft, violence, indecent assault, and like acts—the essential nature of which go to prove a want of appreciation of consequences of such conduct, and a clouded intellect—a true beginning dementia.

It should be remarked here that there is a difference between the acts of the *general paretic* and those of one suffering with the so-called *moral insanity*. In the latter, the nature of the acts indicates great impulsiveness and serious loss of self-control, with criminal and instinctive impulses rising and predominating, while the natural inhibitory control is deficient or wholly absent. Not so with the general paretic's acts, which are not premeditated or are essentially impulsive, but frequently seem to be founded on delusions, with no power of appreciation as to their consequences. An absence of forethought, judgment, and normal moral feeling, amounting to evident mental impairment, are also shown in the general paretic's case, when he, being a wealthy man, purloins in a most ludicrous manner, like a jackdaw, every article, however worthless, in reach. He is, though formerly a moral man and worthy member of society, apt to develop an improper fondness for the other sex, and with a restless energy, give himself up to the most unrestrained libertinism, and shocking his wife and relatives by neglecting all the charms of home, and playing "hero to the barmaid"—doing all this with an audacious boldness, and without the slightest effort at concealment.

In typical cases, there will be delusions that he is to carry out at once the most magnificent, unique schemes of busi-

ness, philanthropy, architecture, universal education, and salvation, and other utterly impossible and expansive projects. He believes himself, though there be every reason to the contrary, the most handsome, the most wealthy, the most intellectual, and the grandest man in the world; and, acting on such delusions, though really having no means with which to pay, he makes, before his insanity is suspected it may be, many extravagant, needless purchases of the finest diamonds, trotting-horses, railroads, etc., not hesitating, while handling imaginary millions, to shower the largest gifts upon every one, especially newly-made acquaintances and quondam friends.

One patient, on seeing the Asylum physician for the first time after admission, insisted on buying the asylum, offering \$500,000 for it, and on being told that this was too little, made, as his next offer, double that amount. On being further told that he could have no use for the asylum, and could not purchase it, he thereupon said that he would build the largest and grandest asylum in the world, with an immense yearly endowment, and make the doctor the physician-in-chief, with a salary of half a million of dollars, providing, at the same time, the most dazzling physician's uniforms, chiefly made of gold. This same patient tried to purchase the horse of every one whom he met on the road, offering, in the beginning, not less than \$500, which, if refused, was doubled at the next offer—going on at this rate, influenced by expansive delusions of wealth, until he spent, in less than a week, many thousand dollars, which he had taken years to accumulate.

Dr. W. Bevan Lewis, Medical Director of the West Riding Asylum at Wakefield, England, records in his recent great work on *Insanity*, the following interesting case:

“A patient, watched through this stage of the disease, conceived exalted notions respecting his family. His eldest daughter became the theme of his constant converse, on which he would fondly dwell until he had utterly wearied his hearers. He then developed a too amiable weakness for the other sex; and, from being a model husband, became

careless, suddenly left his home, and was not heard from for some weeks.

"It then appeared that he had developed a craze for preaching, and had travelled as an itinerant preacher amongst the mining community of South Wales. He returned to his friends deeply impressed with the importance of his mission, talked incessantly upon religious subjects, and became morbidly hypochondriacal."

The following case exemplifies the restless, morbid energy, the expansive insane schemes, moral lapses, lavish generosity, as well as muscular incoördination, and other somatic signs of the first stage:

Q. H., æt. 50 years; nativity, New York; natural disposition, amiable, impulsive; married; wine importer; liberal education; occupation of father, clergyman; patient's habits, intemperate; number of attacks, first; duration of present attack, about two months. Character of first symptoms—thought himself a very rich man, and made extravagant and useless purchases. Probable cause, excesses, sexual and alcoholic, but chiefly the former; has had syphilis; has no suicidal or homicidal tendencies; has had no convulsions or congestive attacks. Mental and physical condition on admission, exalted; has a number of grandiose delusions and insane schemes of philanthropy, business, etc.; memory poor. A few weeks before admission, he made the most extravagant expenditures, and tried to purchase, at reckless prices, a number of houses, railroads, etc., around the city, giving his checks, when he had no money in bank. He claimed that he had purchased (though he could not explain as to how he would obtain the purchase money) a fine summer resort; he said his dining-room servants should wear uniforms of velvet, ornamented with old gold and diamonds.

His moral lapses, since the dread disease commenced, had been numerous—his wanton conduct, in deserting an excellent wife and home for all kinds of excesses, and his getting in jail, for which he was then held responsible, being now understood by his relatives to be but a manifestation of his beginning insanity. Like most paretics in this stage, he wrote many letters, giving the asylum extravagant praise at first, but afterwards condemning it, along with the doctors in charge. The tendency of this patient, who was educated and formerly an accurate writer, to leave out letters of words and syllables, was a noticeable feature

of importance here. His general health had been good, but he has slept badly for four months past.

The physical or somatic signs noticed at this time were the fibrillar tremor of the muscular fibres of the tongue, which was protruded in the characteristic manner; a slight tremulousness and incoördination of the facial muscles involved in speech, especially the upper lip muscle—this constituting the “fatal tremor;” an exaggeration of the patellar reflex, and an almost entire absence of the ankle clonus. The patient had had neither epileptiform nor apoplectiform seizures—not uncommon in this stage, and which may be significant as ushering in the disease fully, and forming a somewhat definite dividing line between the first and second stages.

The unsteady, ataxic gait, of such diagnostic value when occurring early in this disorder, was now noticeable. His articulation, too, had become quite characteristic, he not being able to say, without great slurring, “Round about the rugged rock the ragged rascal ran.” His sense of taste was also somewhat impaired in the latter part of this, the *second stage*.

Though quiet on admission, he soon became noisy and incoherent, and his increased motor excitement evidenced itself by his tearing into shreds all his bedding and dozens of suits of clothes, saying, as he did this, that he had the power to do anything, and would put them together again when he arrived in Paris.

He grew more and more untidy and unobservant of the common proprieties of life, and rapidly advanced to the next, the *third stage*.

A loss of bodily weight and strength has now taken place, and there is a heavy flabbiness about him, and his face is dull and devoid of expression, this being so even when he laughs or smiles. The vigor of all the muscular movements, especially that of the sphincters, is lost, so that micturition and defecation are no longer under the patient's control; and he is so paralyzed as to be unable to walk, or even to stand steady on his feet. He lies thus in bed in a state of the happiest lethargy, rarely if ever trying to speak unless asked if he is the richest and strongest man in the world, when his eye-lids half shut, his facial muscles become incoördinate, like a patient who is going into an epileptic fit, and he mutters out in a spasmodic, drawling way, “Y-a-a,” as the best he can do for “Yes.” His common sensibility is so diminished that pins stuck in his skin are

not felt; his legs have lost all power of voluntary motion, and his trophic system has become so diseased, and the condition of enuresis so constant, that bed-sores easily form.

The patient grew weaker and weaker, and finally died of exhaustion two years and nine months from the date of his admission.

Symptoms and Diagnosis.—Though this was quite a typical case, there are, of course, as occurs in other diseases, many variations from the typical form. Here, as in a majority of these cases, delusions of grandeur, magnificent schemes, and a subjective feeling of great happiness, form the predominating mental trait, on which alone a diagnosis is too often made. Alienists have found that it will never do to base the diagnosis of so dread a disease on these, without the existence also of certain somatic or physical signs, as certain cases of mania also have these exalted ideas, the most beautiful delusions of wealth, power, etc.

These somatic signs, referred to as necessary aids to diagnosis, should be discovered by an examination of at least the pupils, the muscular skin, and spinal reflexes; the stability of the muscles, and separate muscular fibres, and the whole bodily condition.

The *pupils* in the case just cited were, on the patient's admission, slightly contracted, the left being larger than the right, indicating in this case, by implication of the intrinsic muscular action of the eye-ball, a deranged innervation, usually occurring, in all cases, at some stage. This patient's pupils re-acted to accommodation, but not to light, thus exhibiting the "Argyle-Robertson pupil," so significant in the earlier stages of general paresis, as well as in locomotor ataxia and other diseases of the cord. It is essential, then, to look for, among others, the motor derangements of the "intra-ocular musculature," indicated by the size of the pupils; by the inequality of the pupils; by the irregular marginal contour of the pupils; by disordered accommodation and light reflex adjustments of the pupils. In the earlier stages the pupils may be exceedingly small, and so fixed to light that, on alternately shading and exposing the eye,

they fail to re-act to light stimulation, and are then in a state of spastic myosis. This is highly important, as being present in general paresis, as well as in tabetic and other diseased states of the cord. The pupils may also be small from a rare condition of paralysis of its dilator or circular fibres—this being termed paralytic myosis, due to destructive lesions in the cilio-spinal regions of the cord. The pupils in this case fail to dilate with atropine. One or both pupils may, on the other hand, be widely dilated, and act sluggishly, or not at all, to the strongest light—this being a state of paralytic mydriasis.

In the case cited, the *vertiginous attacks* complained of so often in the course of the disease by most of these patients, gave no trouble. Nor was the *nisus generativus*, so prominent in the first stage, noticeable afterwards—complete impotence having, in fact, existed during the second and third stages. There are, however, recorded cases where virility returned after long impotence.

“*Cerebral seizures*,” including convulsive, apoplectic and paralytic seizures, occur in nearly all of these cases—usually in the second stage, but not infrequently far back in the history of the case. These attacks may be: syncopal or quasi syncopal; petit mal, or, exceptionally, grand mal; limited or unilateral twitching; epileptiform discharges; apoplectiform, or true congestive attacks; hemiplegiæ, or monoplegiæ. Some of these seem to follow gormandizing, for which this class of patients are noted, and, of course, indicate the free employment of rectal enemata to rid the alimentary canal of irritating substances.

In Q. H.’s case, the congestive attacks were accompanied by general convulsions, a temperature of 102.5° F., and unconsciousness lasting usually about three hours. These attacks always left the patient in a worse condition.

Besides the mental and physical symptoms mentioned in this case, there was an early and general *incapacity to exercise self-control and to apply the attention* to even the ordinary mental work, along with the *transitory amnesic states*, imply-

ing, as in this case, an enfeebled power of attention—the faculty earliest affected.

The morbid brain anatomy of this disease may well be considered here in connection with the clinical history. The first stage is marked by vaso-motor dilatation of the blood vessels of all the tissues enveloping the brain, and holding its elements together, the bones of the skull-cap, the membranes, the epithelium, the neuroglia, and the arteries—all thus receiving an abnormal blood supply, and consequently acquiring tissue hypertrophy. According to Clouston:—"The encasings and supports of the organ are all found to be affected; and the longer the case has lasted, the more marked are the changes met with. The bone of the calvarium is denser and harder; in many cases the diploë are obliterated, and in many others there is a distinct layering and deposit of membrane on the inside of the inner table of the skull-cap, this being usually confined to the frontal and parietal bones. The dura mater is thickened, adheres more or less morbidly, and frequently leaves shreds attached to the bone. In many cases spiculæ of bone may be seen growing in at the junction of the falx, which is always thickened. When the dura mater, often in layers, is reflected, the most characteristic morbid appearances of the disease are seen. In a number of cases we find under the dura mater and attached to it and the arachnoid a new substance of a morbid and peculiar kind, commonly called a false membrane. It varies in consistence from the fibrous texture of the dura mater itself to a fibreless jelly; in color from that of a grayish white to that of a blood-clot; in thickness, from a film to a quarter of an inch; in extent, from a small patch or two, to a covering of both hemispheres above and below. It is usually thickest over the vertex. In some cases it looks like a clot; in others, like an extra layer of dura mater, but it can always be easily scraped away. When it is removed from the dura mater, that membrane is not congested or inflamed-looking. It always contained new blood vessels, and nearly always blood corpuscles, or blood coloring matter.

On *microscopic examination*, it is found to consist of a newly organized fibrous tissue in a gelatinous matrix, with much granular matter, white and red blood corpuscles, and newly formed and forming capillaries with tender walls. The formation of the substance implies a very great intensity of morbid action in the convolutions, and probably, also, great and sudden changes in the blood pressure within the cranium. The arachnoid is immensely thickened, and either mottled with white spots or striated along the sulci with white fibrous-looking bands. Under it, there is what looks like a dull, opaque jelly, through which the convolutions dimly appear, and under which great tortuous, congested veins meander; some of these being, perhaps, if the case has died during or after a congestive attack, obstructed by little white masses of hard, ante-mortem clot. But this is not really a jelly, for if the arachnoid is pricked, it nearly all oozes out as a dirty, opaque fluid, which varies from two to six ounces in quantity. This is a really compensatory fluid, filling up the space left vacant by the atrophy of the convolutions and brain generally. It does not nearly represent the whole of the brain atrophy, for we have in addition enlarged ventricles and dilated peri-vascular spaces, which often contain six ounces or more of fluid.

The pia mater is thickened, vascular and tough to an enormous extent. The convolutions are atrophied, especially over the vertex of the anterior and middle lobes, and in some localized places elsewhere, and generally tend to be wedged-shape and lie closely together. The pia mater is found to adhere to, and, when removed, to raise up portions of the outer layer of the gray substance on the ridges of the convolutions which stick to the pia mater, are removed with it, and appear as irregular patches over the membrane that has been detached from the brain. The convolutions from which these patches have been removed look eroded like the surface of a cheese where a mouse has been. Now this adhesion of the pia mater to the convolutions, is a very morbid phenomenon. It has never been found to any extent in any patient whose mind was sound and strong before

death. Though the adhesion is only partial in most cases, in some cases it is universal, and represents the acme of pathological process that is very general in the convolutions. As much disease has been found in convolutions to which it did *not* adhere, as in those to which it did. There is rarely even much adherence of that part of the pia mater that dips down into the sulci, and one convolution is not found adhering to the other.

This fact alone seems to settle the question that the disease is not of inflammatory origin, using the word in its ordinary sense. The fact is that the pia mater which dips in and separates adjoining convolutions is different in composition and use from that portion which overlays the whole brain. The former contains no lymphatics, and is a mere fine network of fibres to hold the vessels, while the latter is full of lymphatic spaces.

The whole gray matter is thinner, especially in general paretics that have lasted long. The white substance is often very congested, especially in irregular patches; its peri-vascular spaces are always enlarged, and the small vessels tough, and their coats thickened.

On opening the ventricles, they are nearly always found enlarged; but the most striking peculiarity is, that their normally delicate epithelial linings are toughened and roughened in an extraordinary degree. Their surfaces look, in the less marked cases, like frosted glass; in the more marked cases, they are granular, and even minutely nodular, feeling rough to the touch. They are leathery, too, when torn. This condition is usually most marked in the floor of the fourth ventricle, and the covering of the calamus scriptorius is always a grayish, gelatinous-looking, but really tough membrane. The single normal layer of delicate epithelium has become enormously hypertrophied and has thrown itself up into great nodular masses of epithelium cells, arranged in some cases in layers of one hundred cells deep. These granulations, are, in fact, innumerable epitheliomata growing over a fibrous membrane.

There is no single tissue in the brain whose condition is so morbid as the epithelium linings in the ventricles.

Microscopic examination of sections of the convolutions shows enormous proliferation of the nuclei of the neuroglia which takes place mostly along the small vessels and capillaries. The outermost layer of the convolutions is thinned, altered in appearance and structure, and in the advanced cases, converted into a dense, unorganized-looking texture, instead of the beautiful and regular layer of small cells, and fine granules of a healthy convolution.

The blood vessels are diseased, their coats being thickened and full of nuclei. These peri-vascular canals are morbidly enlarged, sacculated, and filled with all kinds of debris, blood-coloring matter, granules, and minute apoplexies.

There is no nerve tissue that is not found diseased and degenerated in advanced cases of the disease—the retina, the peripheral nerves, the sympathetic ganglia, etc.”

There is, then, evidence that general paresis is a disease of the outer layer or rind of the cerebral convolutions, *i. e.*, of the exceedingly delicate and complex mind-tissue itself, which has more minute, important cells, and far more blood than any other part of the encephalon, and is the highest in quality and function, and the latest evolved of all the organic tissues.

The commonest causes operating on these tissues to produce general paresis, are those that most excite, and at the same time most exhaust the highest brain energy, such as alcoholic, syphilitic and other poisonings; promiscuous, excessive sexual indulgence and hard, muscular labor; constant anxiety and too stimulating meat diet; very hard study and mental overstrain; violent mental shock, and energizing, stimulated by strong, constant stimuli, up to the point of exhaustion. Traumatic causes are also to be considered. Such powerful causes operating steadily for a long time, thus produce this incurable, progressive disease of this tissue—the highest development of the nervous system, and most important factor in mentalization. These, the high-

est centres being affected in typical cases, and it being a property of nerve tissue to degenerate in the routes of physiological activity, whenever that activity ceases, it is seen why all the rest of the nervous system should degenerate as it does in structure and function, and die slowly but progressively.

Statistics on this subject show the prevalence of this disease in some races and places, and its non-existence in others. The Asiatic and savage are said never to have it, while the Scotch and Irish, have it only under certain conditions of life. It is found in the female sex rarely, and then usually only among the classes leading lives of great excitement and excesses.

ART. II.—Adenoids of the Naso-Pharynx in Children—Their Effects and Treatment.

By JOHN DUNN, M. D., of Richmond, Va.

Within the past few years much has been written about adenoids of the naso-pharynx; and in the medical journals are many careful articles, whose object is to show the causative relation of these growths to numerous diseases of childhood, which, though they seldom threaten the life of the child, are very annoying to the parents, physician and child. Indeed, until the appearance of the above-mentioned articles, these were incorrectly treated—the treatment being constantly directed to the diseases as existing *per se* and *in se*, and never to them as merely symptoms of one common cause. Judging from the number of children one may see everywhere, whose faces bear unmistakable signs of the long continued existence of excessive adenoids in the naso-pharynx, the inference seems fair that many practitioners of medicine, busy with the greater ills that flesh is heir to, either fail to recognize the cause of these lesser troubles, or, if they bear it in mind, refuse to grant to it the importance it deserves.

The naso-pharynx is the Rome from which roads lead to the nose, and through the nose to the eye; through the

Eustachian tube to the middle ear; through the larynx into the lungs; and lastly, through the œsophagus into the stomach and intestinal tract; and when this centre is the seat of excessive or diseased adenoid vegetations, it may become the source of disease in any one, or in all, of these organs; and, as a rule, affects more than one at a time. In considering, therefore, the effects of untreated, excessive adenoids of the naso-pharynx, it may be well to look at (1) those upon the nose; (2) upon the eye; (3) upon the ear; (4) upon the lungs; (5) upon the stomach and intestinal tract.

The interesting questions involved in the etiology and history of these growths will be reserved for a separate article.

I.—*Effects of the Presence of Adenoid Vegetations in the Naso-Pharynx upon the Nose, including Nasal Cavity.*—These effects vary much according to the relative amount of the growths present, the duration of their existence, the condition of these growths—especially as a separate pathological process has or has not been super-added in them—the constitution of the child, both inherited and acquired, and the conditions of life to which it has been subjected, together with the anatomical peculiarities of the nasal spaces in different individuals.

One of the striking symptoms of the presence of these growths in children, especially young ones, is the annoying, more or less constant, discharge from the nostrils. It differs in many respects from the acute coryza, to which adults are subject. The child does not seem to suffer the same discomfort that accompanies acute coryza; the chilly sensations are absent, the eyes are not necessarily inflamed, and the discharge from the nose does not vary much in character from day to day; the cold in the head of the child seems to remain at one thing, under certain conditions, for a long period of time. "He always has a cold in the head." At the same time, the child does not breathe through his nose, or he breathes through it but imperfectly. The turbinates are swollen; and sometimes it happens, either from constant

pressure of the swollen turbinate against some prominent part, especially of the lower part of the septum, or from long accumulations of irritating mucous discharge, perhaps both, that an ulceration forms, and the turbinate and septum at this point grow together, and remain so as to be a constant factor in the production of "throat and nose" trouble.

Another evidence of the presence of these growths, and dependent upon the catarrhal discharge from the nose, is an inflamed condition around the entrance into the nostrils. This inflammation, though generally circumscribed, sometimes assumes an eczematous nature, and if the adenoids be left *in situ* proves to be exceedingly difficult to cure.

That a nose should attain the full shape for which the plan was laid in the fœtus, it is necessary that there should be a constant change of the air in the nasal passages. The stimulus of the air passing over the nasal mucous membrane, is essential not only to the complete and regular development of the turbinate bones, but also of the nose bones, of the vomer, of the ethmoid, of the cartilaginous septum—and of the various parts entering into the formation of the nostrils. Fortunately it is rare that the obstruction to nasal breathing is complete; and, moreover, the obstruction, to a high degree is confined chiefly to the earlier years of childhood. The development of the naso-pharynx, and the tendency that these growths have to become smaller as the child advances in years makes room for the passage of air through the nose. Where, however, adenoids have existed in such quantity, or have been developed in such positions, or have been so affected by inflammatory processes, as to cause interference with free nasal respiration, the effect of the same is always felt in the development of the nose as a whole, and in the majority of cases, can be seen in the shape of the outer nose.

The *adenoid nose*, is essentially a weak one, and one showing signs of irregular and unsymmetrical development; and its shape often mars a face which would have had much beauty, had not the regular growth of the nose been interfered with. The delay in the development of the nasal

bones causes a flattening of the bridge of the nose. This delay is due to lack of stimulus from the active advance of the septum. The nasal bone lacks support. In the same way the lateral cartilages of the nostrils—owing to disease of the nostrils during complete stoppage of the nasal passages, and to their unequal use when one side of the nose is freer than the other, and to their want of full support from the septum—become unequally developed, or are developed not at the proper planes to each other; and, as a result, the nostril-walls thicken, or at times are too thin in certain places, and lose their normal curves. The later development of the facial bones and of the nose, removes, in a great measure, many of these faults due to nasal obstruction; but where excessive adenoids have existed for a long period of time, the nose, no matter how vigorous its development after the restoration of nasal respiration, will always tell plainly its early history. The septum is also affected by the stoppage to nasal respiration, and a certain proportion of the cases of thickening of the cartilaginous portion, especially in its upper posterior aspect, can, I am inclined to think, be traced to the early existence of adenoids.

It may be of interest to mention here, in passing, two conditions, which, though I am unable to prove them to be directly, or indirectly, dependent the one upon the other, are often enough associated to make an observer wonder whether they are the results of a common cause; and, if so, whether the one condition may not have some influence in determining the other. The two conditions are:

1st. A hypertrophic state of the upper and posterior part of the cartilaginous septum of one side—so hypertrophic that it furnishes an obstruction to the direct passage of air from the nostril entrance to the middle and superior turbinates, and often preventing any anterior view of the middle turbinate.

2nd. A marked diminution of the power of hearing on the side corresponding to this enlargement of the septum, as compared with the hearing power of the opposite side; and this when the air passages of the lower and posterior

parts of the nose are apparently sufficiently free. Often, in older children, and in adults, these adenoids, or their remains, are the cause of a hypertrophic condition of the turbinates, which it is useless and unscientific to try to reduce with acids or the cautery as long as the adenoids are left in the naso-pharynx, and which disappear without further treatment as soon as they have been removed. Epistaxis is of not infrequent occurrence in these cases, and it is probable that its source is to be sought in some small ulceration caused either by the nature of the catarrhal discharges or by pressure of the swollen turbinates.

II. *Effects upon the Eye.*—In writing of the delay in development of the nose bones caused by nasal obstruction, mention was made of the ethmoid bone, whose orbital plate furnishes not an inconsiderable part of the bony surface of the orbit. It is in the highest degree probable, that continuous nasal obstruction in early childhood delays the development of this plate, as well as of the rest of the ethmoid bone, it being an integral part of this bone; and, if so, the orbit is necessarily prevented from developing properly. This is a highly important point, for the eyeball is contained in the orbit, and the shape of the orbit necessarily determines, to a greater or less degree, the shape of the eyeball.

And just here, I believe, is to be sought the explanation of the fact, that the majority of children who have suffered from nasal obstruction, and post-nasal adenoids, as the chief cause of this condition, are far-sighted, and to a degree higher than can be explained by inheritance. The eyeball being in the orbit is influenced in its development within certain limits, though the laws of inheritance stamp their plan upon it while it is in embryo, by the development of the orbit. And here, again, in the faulty development of the orbit, is to be found the explanation of some of those sporadic cases of astigmatism which one meets with from time to time—that is, certain of those cases of astigmatism which are not inherited, and which cannot be explained by

influence of previous inflammatory conditions of cornea, etc. I will cite one example here which is striking enough.

Mr. X, aged 22, has a father, mother, three brothers and a sister whose eyes may be called normal, showing but a slight amount of hyperopia; no myopia in the family. Mr. X, himself, shows marked astigmatism in one eye, while his nasal history is one of obstruction to a greater or less degree, greater in one side of the nose than the other, and lasting for a number of years.

Most writers on refraction of the eye say that in many cases the degree of hyperopia decreases as the child attains its growth. The degree of nasal stenosis, due to post-nasal adenoids, grows less and less as the child grows older; and so more and more of one of the necessary stimuli to the growth of the nose bones is furnished; and the nose bones, with the orbit, obtain their size and shape as performed in embryo, except in so far as they have been influenced by contrary external conditions, and, among these, nasal stenosis. I would even go further and find in this unsymmetrical development of the orbit, one of the causes of want of equilibrium in the eye muscles, giving rise to hyper-, ex- and es-ophoria—especially the first of the three.

Among the *inflammatory affections of the eye*, which are of so frequent occurrence in children suffering from post-nasal adenoids that a connection between the two may be considered as beyond question, may be mentioned phlyctenular keratitis, phlyctenular conjunctivitis, catarrhal conjunctivitis, marginal blepharitis, and eczema of the lids, which last may even extend over the whole of one side of the face, and often is combined with eczema of the outer ear.

The *phlyctenular troubles* deserve a few words. The last articles on these troubles, in discussing their etiology, mentions "age, occurring chiefly in children," "unhygienic surroundings," "astigmatism," "bad and improper food," as the probable causes. While it is true that phlyctenes occur most frequently in children whose surroundings are "unhygienic," it is doubtful, to a high degree, if astigmatism has anything to do with their production; nor has "bad and improper food," further than that "bad and im-

proper food " tends to lessen resistance to disease; nor will youth and unhygienic surroundings produce phlyctenes of the cornea or conjunctiva. In the vast majority of cases of children suffering from phlyctenular troubles, there will be found a coincident rhinitis, and behind this, unhealthy adenoid vegetations. The picture presented by these cases is so characteristic, that once recognized, it is not easily forgotten.

Phlyctenes and a Running Nose.—Generally the child has "had a cold for a long time" before the eye trouble begins. Some writers believe that scrofula predisposes to phlyctenular eye inflammations. It is true that the phlyctenes occurring in scrofulous children are more obstinate to treatment, have a greater tendency to recur, and to produce more lasting damage to the eyes, than do those occurring in non-scrofulous children; but this is only because the improperly treated rhinitis of scrofulous children is severer in its manifestation and more lasting in point of time than is the improperly treated rhinitis occurring in non-scrofulous children. In the majority of cases of phlyctenular troubles in children, where the affection is confined to one eye, it will be found on examination that the rhinitis on that side is apparently greater in degree than on the other side; *i. e.*, that the discharge from the nostril on the side of the phlyctenular trouble is more profuse than that on the other side. This may be due to one or both of two causes—either the rhinitis is really more severe on this side, perhaps from some anatomical intra-nasal condition; or the two sides of the nose, having been at first equally affected, the second side has become more inflamed after the appearance of the phlyctene in the eye; for the phlyctenular affections cause a hyper-secretion of tears, and of a nature often severe enough to inflame, even to bleeding, the skin of the outer canthus of the eye, and a greater proportion of these tears are carried into the nose, where their irritant action upon the nasal mucous membrane will readily produce excessive acute catarrhal discharge from the mucous membrane.

It is highly probable, then, that the excessive discharge

from the nostril on the side corresponding to the eye affected, is due to the hyper-secretion of tears. This is rendered even more probable when one considers the cases of acute monolateral, non-purulent conjunctivitis, which are accompanied by a severe monolateral rhinitis.

The cause, then, of phlyctenular eye affections in children, in the vast majority of cases (I can imagine other causes), is to be sought in the catarrhal condition of the nose—in the catarrhal discharges therefrom, which, in turn, are due to the unhealthy conditions of adenoids present in the post-nasal space. Whether the phlyctenular trouble be due to the germs which find a culture medium ready prepared in the altered and often stagnant secretion of the nasal spaces, or to a chemical product, the result of disorganizing changes in these nasal discharges, I am unprepared to say; but that it is due to one of the two, I feel convinced.

The mode of transference of this secretion from the nose to the eye may be either through the lachrymal canal, which, I think, highly improbable; or directly from the nostril-entrance into eye externally, either by the child rubbing the nose and then the eye, as he is frequently seen to do, or through the agency of the pocket handkerchief, or by the pillow becoming saturated for a certain space with the nasal discharges while the child is asleep, and then the child turning over, so that the eyelids touch this space. This latter, *i. e.*, moistening of the pillow with the discharges from the nose in these cases, is often. It is probably the cause of the moist eczematous condition of the posterior aspect of the auricle, and of the lobe of the ear which is found accompanying, not infrequently, phlyctenular conditions of the eye. It is not the rule for phlyctenular troubles to occur where the parents are at all careful about removing the discharges from the nostril-openings as soon as they appear, and where they teach the child to keep his nose as clean as he can. These troubles occur chiefly where the children have been greatly neglected, owing either to the ignorance of the mother, as in the cases of negroes, or

to her being obliged to do so much work for her daily bread that she cannot give proper attention to her children, as in the cases of factory operatives.

Catarrhal conjunctivitis is not infrequently found accompanying a rhinitis due to adenoids. This conjunctivitis may be confined to one eye, or may affect both eyes at once, or one eye after the other. Sometimes it co-exists with a phlyctenular condition of the cornea-scleral margin. In one case which came under my observation, the child had a phlyctene of the cornea, which healed entirely under yellow oxide of mercury ointment; several months later, a monolateral catarrhal conjunctivitis, when getting well, was followed by a crop of small styes.

Marginal blepharitis is also at times found as a condition consequent upon the presence of a continued rhinitis due to adenoids of the naso-pharynx; though in this case I would look for an additional cause besides the secretions of the nose.

III. *Effects upon the Ear*.—In no organ are the effects of the continued presence of unhealthy adenoids of the naso-pharynx so certainly injurious to the functions of that organ as they are in the ear. My own experience leads me to believe that in every case, without exception, where there have existed for a certain length of time in the post-nasal space excessive adenoids which have been the seat of unhealthy inflammatory processes, there supervenes, sooner or later, middle ear complications, which impair to some extent the power of hearing; and, as a rule, this impairment is progressive in its nature. Further than this, in this part of the world, by far the greater number of all cases of impaired hearing are to be attributed to the existence at some time of these adenoid growths.

Exactly how the inflammation spreads from the naso-pharynx into the middle ear has been the subject of much discussion. The important factor is thought to be the interference with normal respiration, due to the nasal stenosis caused by these growths. Some authors consider that this interference produces rarefaction of the air in the post-nasal

space, and this, together with the closed condition of the Eustachian tube-mouth, causes a rarefaction of the air in middle ear, giving rise to hyperæmia of its mucous membrane, which, in turn, is the cause of the condition of affairs to be found in middle ear catarrh.

In this view, undue importance is given, I think, to the rarefaction of the air in the post-nasal space; for the nasal stenosis in the class of cases under consideration is, though often high in degree, seldom complete; and the general atmospheric pressure is such, that one is forced to believe that though this opening through the nose into the supra-pharyngeal space may be small, the atmospheric pressure will always remain the same in the naso-pharyngeal space that it is outside the body—the air in this space being, however, comparatively stagnant. Doubtless the rarefaction of the air in the middle ear has much to do with the production of the middle trouble in these cases; but this rarefaction is, perhaps, due altogether to the closure of the Eustachian tube, or to causes impeding the proper movements of its mouth. Direct inflammation of the Eustachian tube-lining may bring about this closure, though it is probable that this is the cause in only a relatively limited number of cases. In about one case in every three of adenoid growths of the naso-pharynx—perhaps in one-half the cases, that have come under my observation—there have been adhesions between some part of the mass of the adenoid tissue and the Eustachian tube-mouth, or there have been developed beneath the reflection of the mucous membrane from the Eustachian tube-mouth to the pharyngeal wall, masses, larger or smaller, of adenoid tissue, which served more or less as an impediment to the free movements of the tube-mouth. This adenoid tissue exceptionally will be found to extend over the tube eminence into the mouth of the tube, and in contracting, as this tissue does after existing for a time, will cut indentations into the tube eminence just as though the mouth was bound down with a cord. Generally, however, the adenoid tissue development concerns only the outer posterior, under and upper aspect of the

tube-mouth. It seems highly probable that these adenoid adhesions of the tube-mouth are, to no little degree, responsible for the catarrhal conditions of the middle ear, for they interfere with the natural movements of the tube, and cause either undue patency, or undue closure of the tube entrance.

In the great majority of cases of ear-ache in children, there will be found a concomitant diseased condition of the adenoid tissue in the naso-pharynx; and the household remedies of hop-bags, and the thousand and one solutions for instillation into the ear (none of which are superior to warm water or oil) meet no other indication for the treatment of the disease than the endeavor to relieve the moment's pain.

So also most of the cases of "running ears" in young children find their prime cause in diseased adenoids, plus certain other factors.

IV. *Effects upon the Lungs.*—That the growths in question are oftentimes an assistant cause to the production of many of the inflammatory conditions of these organs, must be considered as true. They are not the direct cause, as they often are, for instance, of the catarrhal rhinitis. The blame that must be laid at their door is that they cause nasal stenosis, and so compel the inspiration of unwarmed, unfiltered air into the lungs; and, further, their influence upon the general health, a point which will be touched upon later on. Bronchitis and pneumonia are the two lung troubles that occur most frequently in these cases. And while the case histories of the children that come for treatment for some manifestation of these post-nasal adenoids so frequently tell of one or the other of these troubles, that a causative influence in the adenoids as the permanent trouble must be suspected; still surrounding the children are so many other conditions of life which might have a determining influence on these diseases that it is impossible to determine the exact causative importance to be attributed to nasal stenosis. Most writers, however, rightly agree that this causative importance is great.

True asthma has been said to be sometimes dependent

upon these growths. In children, there is often a difficulty of obtaining sufficient breath while lying down, when the post-nares is filled with these growths; but this condition is generally associated with hypertrophy of the tonsils in these cases. I have never seen a case of true asthma from this cause.

V. *Effects upon the Stomach and Intestinal Tract, and thus upon the General Health.*—In young children, the stomach, among its other offices, acts as the drip-cup for the pharynx and naso-pharynx. To clear the throat effectually requires a muscular effort of which young children are incapable, which is awkward for them to learn, and to make efficient use of which, children must reach a certain age, and in many cases require to be taught—it being natural for them to dispose of the pharyngeal secretions in another way. Gravitation allows a certain, though perhaps small, part of the naso-pharyngeal secretions to run out at the nostrils; the remainder, not being absorbed *in situ*, must be disposed of, and, running down into the pharynx, is swallowed, and finds its way into the stomach. When the adenoid tissue of the naso-pharynx becomes what are generally known as adenoid vegetations, the amount of these secretions becomes considerable; and when, under certain conditions—especially, perhaps, diathetic ones—these vegetations take on a chronic inflammatory nature, the amount of matter secreted by them would, could it be measured, surpass greatly the belief of those who have given the matter a thought. This catarrhal exudation from the post-nasal space finds its way into the stomach; sometimes this exudation has more or less of a purulent nature, sometimes it is retained in post-nares long enough to undergo certain chemical changes. Furthermore, the nature of these discharges, and their surroundings, affording, as they do, moisture and warmth, is such that they must be the breeding-ground for innumerable germs of different kinds, and often enough, under certain conditions, of germs capable of originating disease. Certain parts of these discharges, when in the stomach, re-

quire a digestive effort to dispose of them, and a certain amount of them must pass into the intestines.

Fischer has lately written an article showing the relation between naso-pharyngeal catarrh and gastric catarrh, in which he lays particular stress on the pharyngeal discharges—more correctly from the diseased adenoids of the naso-pharynx. These discharges, when in the stomach, act perhaps in several ways to produce gastric trouble. They, during certain conditions of the adenoid inflammation, are (being more or less continually poured into the stomach) requiring a more or less continuous digestive effort, resulting in abnormal activity of the gastric glands.

It is probable that certain of the constituents of the naso-pharyngeal secretion interferes with the proper digestion of food when it finds its way into the stomach, by producing chemical changes in it. The "large quantities of catarrhal (usually muco-purulent) exudation" (Fischer), at times to be obtained by washing out the stomachs of children suffering from diseased adenoids, make it highly probable that the stomach tries, in its efforts, to expel all this continually increasing mass of exudation from the naso-pharynx, and that it accumulates then in the stomach, where its presence is sufficient to produce gastric inflammation.

And without going here further into the question, it may be added that consideration of the question makes one believe that not a few of the intestinal troubles of children are directly due to the presence in the intestinal tract of this naso-pharyngeal secretion—the trouble being produced either by the germs brought down in the secretion, or by chemical disintegration of the secretion, or to disorders in the digestive processes caused by the presence of excess of these discharges.

Before leaving the subject of adenoids in children, it may be well to notice one or two other points.

A child with enlarged adenoids of the naso-pharynx does not necessarily mean an unhealthy child, for frequently, in perfectly healthy children, this post-nasal tissue is hypertrophied. But if there be superadded in these vegetations, an

inflammatory process, such as is the rule where this tissue is developed to an excess, the effects of the continuous discharges from these growths will, sooner or later, to some degree, make its influence felt upon the health of the child; and where the child has a weak constitution to start with, the effects of the adenoid discharges will be potent factors in keeping the constitution weak.

Much has been written about a condition of mental sloth, a seeming distaste for study, etc., in children, with excessive adenoids. This is probably due to the condition of eye-refraction, together with unpleasant sensations of malaise accompanying these growths where excessive.

Treatment.—Certain points in regard to the treatment of post-nasal adenoids must be reserved for the article in which the question concerning the ætiology and further history of these growths will be considered. The remarks here on treatment apply to the treatment of these growths when existing in such quantities, or in such conditions, as to cause affections of the nose, eye, etc.; the proper treatment of which affections is the treatment of the diseased adenoids.

A few applications of yellow oxide of mercury salve will, in most cases, cause a phlyctenular conjunctivitis to heal in a few days, but a yellow oxide salve will not prevent its recurrence; and so warm water in the ear of a child suffering from earache, due to adenoids as a first cause, often temporarily relieves the pain, but it does not remove the inflammatory ear trouble, nor prevent the deafness which is so often going to follow, nor any of the troubles consequent upon diseased adenoids.

In theory, it seems proper to rely upon the use of a spray to induce a healthy state of the adenoids in the naso-pharynx; but, in reality, sprays in the case of young children do but little good, and, in most cases, when one considers how they are used, they do no good at all; so that it is merely a waste of money and time to purchase them.

In the early stages of the adenoid trouble, when the tissue is only moderately hyper-developed, one may look for some good from astringents applied to these growths; but consid-

ering the difficulty of making a thorough application, the use of astringents is to be recommended in only a very limited number of cases.

The one treatment to be recommended for these diseased adenoids is removal, and the removal of the adenoids behind the naso-pharynx is the one proper treatment for all the active troubles resultant from their presence. The use of acids and the electro-cautery are not to be recommended as the means of removal, both being at times the cause of harm. While the complete removal of these growths would probably be advisable in young children—*i. e.*, in children under 6 or 7 years of age—this is not always practicable, as they will not submit to the insertion of a palate retractor, without the use of which it is impossible to say when all of this tissue has been removed.

With children under 7 years of age, and with older children, who cannot be made to submit to the use of the palate retractor, chloroform is necessary, or, at all events, its administration is to be preferred to forcing the struggling child to submit to the operation without it. A condition of semi-narcosis is all that is needed, and is to be preferred to complete narcosis, inasmuch as the work can be done without much danger of the child draining any of the blood from the wound into the larynx. For the removal of these growths, some form of post-nasal forceps or snare may be used—different operators preferring different instruments. With young children we have to be satisfied, as a rule, with removing enough of the diseased tissue to remove the obstruction to nasal breathing, waiting until the child gets older to accomplish a complete removal.

When the child becomes old enough to submit to the introduction of the palate retractor (and that invented by Dr. Joseph A. White, of this city, is by far the best instrument for the purpose), the removal of this tissue becomes, with a properly constructed pair of Læwenburg's forceps, an easy matter; for when the palate retractor is in place, the naso-pharynx is in the rhinoscopic mirror, and is as plainly visible as the palm of the naked hand, and all that is required

for its removal is a knowledge of what ought to be seen in the post-nares, the exercise of some judgment as to what to remove, and the instrument for removal. A properly applied 4 to 6 per cent. cocaine solution so deadens the growths that, as a rule, there is little or no pain caused by their removal. The hæmorrhage, except in the case of "bleeders," is seldom troublesome, nor is there need of any after-application to the wounded surfaces, which heal, as a rule, rapidly.

ART. III.—Intubation of the Larynx for Diphtheritic Stenosis, with a Short Account of the Operation, and Some Practical Suggestions Regarding It.

By BERNARD WOLFF, M. D., of New York, N. Y.,

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It is not my intention to give a long and tedious précis of the treatment of laryngeal diphtheria. I merely wish to record an experience with sixteen cases of laryngeal stenosis due to the pseudo-membrane of diphtheria, treated by the O'Dwyer tube.

First, however, I wish to give a brief account of *the operation, the difficulties and accidents attendant upon it*, and suggest ways of overcoming them.

The operator should thoroughly familiarize himself with his instruments, and the anatomical structure of the larynx and the adjacent parts, prior to attempting the operation. Such information can only be obtained by experimentation upon cadavera or suitable lower animals. It may be said in this connection, that introduction and extraction of the tube is much easier upon the dead than upon the living subject. It must be held in mind that in cases where intubation is indicated, dyspnœa is markedly present, the patient is struggling, and the larynx is striding up and down; the sternum is plunging forward and receding; and all the muscles of respiration, notably the diaphragm, are contract-

ing violently. On the dead subject, of course, these difficulties in the way of a successful operation are absent.

The *method of performing intubation* is as follows: The child is taken upon the nurse's lap, placed upon its back, and wrapped around with a sheet or blanket, so that the arms are firmly bound to the sides. The head reclines on the nurse's left shoulder, and is steadied by an assistant. An O'Dwyer-Denhard gag is then inserted into the mouth between the teeth on the left side, and the mouth is pried widely open. The operator then seizes the introducer, previously armed with a tube, gauged to suit the age and size of the patient. A thread is run through the eye in the head of the tube. The index finger of the left hand is then passed over the dorsum of the tongue until the epiglottis is felt. This is hooked up if possible (the epiglottis is often rounded instead of leaf-shaped from œdema involving it and the ary-epiglottic folds and cannot be raised up), and the tube introduced into the mouth parallel to, and on a plane with, the finger, until the tip of the tube rests upon the chink of the glottis. The handle is then elevated, directing the tube downward and forward until it passes neatly into the larynx. The same finger is then placed upon the head of the tube in position, and the instrument withdrawn, the obturator or hinged plug of the tube being liberated from the tube by means of a forked-sliding process attached to the extreme end of the introducer. The thread (eighteen inches long and of silk), which is used to withdraw the tube, if it be thought necessary immediately after intubation, is now passed around the patient's right ear and the gag removed. If the dyspnoea is immediately relieved, the thread may be cut through and removed, never omitting, however, to steady the tube *in situ*, by inserting a finger upon its head, for pulling on the thread will withdraw it.

There are some *avoidable and some unavoidable accidents* in intubation. Dillon Brown* mentions every conceivable accident that could occur. It is my opinion, founded upon

* N. Y. *Medical Record*, June 13, 1887.

close observation of these sixteen cases, that all accidents, with due care and skill, can be avoided.

I cannot go into this thoroughly, but I may as well mention, in passing, that the principal accidents considered "unavoidable" by the author just named, are "pushing down pseudo-membrane before the tube; fatal obstruction from fragments in or below the tube; and coughing out the tube." In all of these, it will be seen that immediate removal and reinsertion of the tube will ordinarily conquer the difficulties.

At the time this was written (1887), the ineffectual Waxham tube was largely used. I have no doubt but that Dr. Brown has modified his views since the improved O'Dwyer tube has been used. In case the membrane becomes forced down before the advancing tube, like the finger of a glove or a gun-wad, the tube should be extracted at once. The intubation has done no harm, and may have served to detach the pseudo-membrane from the laryngeal walls, when it occasionally happens (as in a case of Dr. F. W. Lester, of New York,) a complete cast of trachea and bronchial bifurcation is ejected. The tube may be introduced clumsily, and become pocketed in the folds of the lateral walls of the larynx. Such an accident need not occur. There need be little fear that, with the improved O'Dwyer tube, it is possible for the tube to escape from the larynx into the trachea or bronchi. This has been proven by the experiments of F. Huber, when considerable force was used to draw a proper sized tube through a larynx without success.

Extraction (other than by the thread) is certainly more difficult than introduction. In large children it is comparatively easy; in small children, especially those of a humored and stubborn disposition, extraction is sometimes very hard.

It is effected in a manner precisely similar to introduction. The child is put in position, gagged, and the left index finger introduced into the mouth until it impinges upon the fenestrum of the tube. This must be located accurately, and its ready accomplishment requires some tactile educa-

tion. The extractor is passed in like the introducer, and using the intromitted finger as a guide, the extremity, which is milled and opens like the bill of an aquatic bird, is passed into the opening in the head of the tube. The blades are opened and the roughened edges, straining against the lumen of the tube, take a firm hold and readily remove the tube.

I must repeat somewhat to give reiterative emphasis to what I have said of the difficulties of the operation. These difficulties will have to be experienced to be appreciated. The proverbs of Solomon are as idle as the fictions of the Arabian Nights, if one has not seen and felt the truth of them.

Should the membrane be pushed down, on intubation, before the tube, and occlude the air-passages, the tube must be at once drawn out by the thread attached to it. It may, after a little while, be reintroduced, or another one, large-sized, short, and with a large calibre, be inserted, to remain in for a short time, not longer than five hours. The act of loosening the pseudo-membrane from its laryngeal attachment is a desideratum, while rude and forcible removal of membrane from the soft palate or pharynx is to be avoided. It is probable that the tissues of the interior of the larynx do not afford suitable soil for the growth of and discharge of ptomaines by the Klebs-Löffler bacilli. (Is the exudate, then, truly diphtheritic?)

The *membrane in the larynx may or may not reform*. It is a question whether an apparent reformation be not simply fragments of membrane below the larynx. If there be membrane below the larynx (and this is recognized by asphyxia from a plugged tube, and by a peculiar grating sound, as though the larynx were endeavoring to rid itself of a useless encumbrance), the tube should be at once removed, and the membrane may follow or appear within grasp of forceps, or be coughed out.

Repeated short attempts at introduction and extraction of tubes is much less injurious than one long attempt, when much damage may be inflicted.

It is a very practical hint to keep the patient's arms snugly confined during the whole operation, for once liberated, the child will grasp the thread passed around its ear and jerk the tube bodily out.

Care must be taken in using the *O'Dwyer-Denhard gag*. The child will in most cases keep its teeth firmly clenched and struggle for freedom. It can be made to open its mouth widely by inserting a tongue-depressor until it touches the soft palate and posterior wall of the pharynx, when the reflex is established and the child involuntarily opens its mouth. At this moment the gag is put in position, and the blades widely but not forcibly dilated. Accidents, such as breaking off teeth, extensive injury to the gums and mouth, and even fracture of the lower jaw, have occurred in the injudicious use of the gag.

Of the *after treatment*, I shall say but little. Mercury is employed in the form of calomel fumigation (gr. x-xx) every one, two, or three hours. A solution of bichloride of mercury (1-4000), may be used as a spray if there exists exudate in the nose, or soft palate and pharynx. The time-honored mixture of the tinct. chloride of iron and chlorate of potash, may be used in fair sized doses every half hour. Dr. O'Dwyer objects to the chlorate of potash. Bichloride of mercury in tablet triturates of gr. 1-60, may substitute the calomel fumigation, and be given at frequent intervals.

It is only in these cases that mercury seems to have an appreciable effect upon a plastic, exudative inflammation.* Heart tonics, such as 5 to 10 minim doses of equal parts of tinct. nux vomica (Squibb's), and tinct. strophanthus; general tonics, as tinct. of cinchona, or elixir of strychnine, iron and quinine, in 5ss. 5j. doses, and stimulants and concentrated nourishment, form the remainder of the treatment of an uncomplicated case of diphtheritic croup. Nitro-glycerin (gr. 1-100—1-200), is a heart tonic and antispasmodic of great value.

Feeding is at first difficult. The epiglottis and ary-epiglottic folds may be œdematous and swollen, and will not

* Goodhart's *Diseases of Children*.

fit neatly over the head of the tube, and a small quantity of fluid thus gaining access to the larynx will cause an exhausting cough. The larynx will generally—due perhaps to a lessening of œdema of the epiglottis and adjacent parts—finally accommodate itself to the new order of things and become more tolerant. If the child be laid upon its back across the nurse's lap, and the head allowed to hang very low, less dysphagia will be noticed; the fluid nourishment then runs, as it were, "up hill." This method was introduced, I think, by Dr. Joseph O'Dwyer, the undisputed "father of intubation."

I give on the next page a table of cases. The form is adopted from Huber (Proceedings of Academy of Medicine, New York, June 13th, 1887.)

It will be observed in cases IV, VI, and XII, that there was a complication of diphtheria with measles, which Dr. O'Dwyer tells me he considers usually fatal.

The prime end of tracheotomy is to relieve dyspnœa by making a false air passage. In none of the cases here reported has intubation failed to accomplish what tracheotomy would have done. Intubation relieved in every case except those in which the trouble was "too deep for any leech to heal."

If the tube be coughed up at very short intervals and retained only a short time, something is gained; but tracheotomy might here be considered.

For *indications for intubation and tracheotomy*, I quote Dr. O'Dwyer literally. He says: "That should death be impending from obstruction in the larynx, and should one competent to perform the operation be at hand, it (intubation) should be done; otherwise, tracheotomy is to be preferred as the safer of the two. Intubation will accomplish all that tracheotomy will, and a great deal more; but tracheotomy may be called for after intubation has failed, should loose membrane exist in the lower part of the trachea. As a primary operation in croup, when an intubationist is at hand, tracheotomy is absolutely unjustifiable." Intubation, after such practice as was indicated above, becomes an easy oper-

Case.	Age.	Diphtheritic patches on.	Complications.	Degree of Stenosis.	Tube re-moved.*	Relief to Dyspnoea.	Recovery.	Cause of Death.	REMARKS.
1	2½ yrs.	Pharynx.	Broncho pneumonia and nephritis	Advanced.	.....	Temporary.	.....	Broncho-pneumonia and asphyxia.	Prognosis fatal from beginning. Tube inserted twice.
2	6½ "	Pharynx and tonsils.	Pneumonia.	Considerable	.....	Immediate.	Yes.	.....
3	3½ "	.....	.....	Advanced.	.....	Temporary.	.....	Exhaustion and Sepsis.	Died just after operation.
4	3 "	Pharynx and tonsils.	Measles.	"	Cough'd out.	Immediate.	Yes.	.....	A clear case of the value of intubation.
5	2 "	Soft palate.	Periadenitis.	"	.....	Not at once.	Yes.	.....
6	2 "	Pharynx and uvula.	Measles.	"	.....	Immediate.	Yes.	Sudden heart paralysis.	
7	4 "	Pharynx.	.....	"	.....	"	Yes.	.....
8	3½ "	.....	Enterocolitis.	Fairly advanced.	.....	"	.....	Exhaustion from complications.	Intubation euthanasial.
9	6 "	Pharynx.	.....	Advanced.	.....	"	Yes.	.....
10	3½ "	Pharynx.	Nephritis.	"	.....	"	Yes.	.....	{ Large and small calibre tubes used without success.
11	10 m's	Soft palate.	.....	"	.....	None.	.....	Asphyxia.	{ Contracted measles after intubation.
12	2 yrs.	.....	Measles.	"	.....	Immediate.	Yes.	.....	No specimen of urine contained less than 40% albumen.
13	3 "	Phar'x & all soft palate.	Nephritis.	"	.....	"	.....	Convulsions and Asphyxia.	
14	10 "	.....	.....	"	.....	"	.....	Slow paralysis of heart.	
15	4 "	Pharynx and tonsils.	Pneumonia.	"	Cough'd out.	"	.....	Asphyxia.	
16	3 "	Soft palate and tonsils.	Pneumonia.	"	.....	Slow relief.	.....	Heart paralysis.	

* No accurate record was kept of the length of time the tube remained in the larynx; it was ordinarily left in position from five to twelve days.

ation. It is safer than tracheotomy, preferable from an æsthetic point of view, easier to manage than a tracheotomy wound, and it *saves many little lives*.

I believe that the day is not far before us when tracheotomy will become, like venesection, except in a few instances, practically abandoned. In intubation, on the contrary, improvements are being made continually, and it is not idle to say that in process of time it will become so simple, and its virtues so great, that every intelligent practitioner will be a skilled intubationist.

SUMMARY.

Years.	No.	Recoveries.	Deaths.
10 months.....	1	0	1
2 years.....	3	2	1
2½ years.....	1	0	1
3 years.....	4	1	3
3½ years.....	3	1	2
4 years.....	2	1	1
6 years.....	1	1	0
6½ years.....	1	0	1
10 years.....	1	0	1
Total number of cases.....			16
Recoveries.....			6
Deaths.....			10

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ART. IV.—Case of Compound Fracture of the Skull.*

By EDWIN L. MORGAN, M. D., Washington, D. C.

In the ancient burial-grounds of the Palæolithic or Archæolithic Age of Lubbock, and also the more recent stone age of Europe called the Neolithic, were found several fractured skulls, some of which had been trephined—thus proving the operation of trephining to have been quite common during the last period mentioned—the polished stone age. In the cave of Cero-Magnon, M. Louis Lartet, a celebrated palaentologist, found a female skull, the frontal bone of which showed a wound “in the process of healing,”

*Read at a meeting of the Medical and Surgical Society of the District of Columbia, May 18th, 1891.

which had been evidently caused by some flint weapon. A Danish dolicho-cephalous skull of the stone age was found by the elder M. Lartet, which had been pierced by a spear-head made of elk horn. In the cavern of Chauvaux, in Belgium, a parietal bone was discovered, which had been fractured by a flint ax; the weapon remained fixed in the cranium. Dr. Prunières obtained, from the interior of a dolmen, a skull which had been trephined in childhood; when this same person died in adult life, it was found he had been trepanned a second time. The piece of bone in this case removed after death measured seven inches in length, and five in its widest part. Many trephined crania have been taken out of dolmens, and the pieces of bone which had been removed at the operation were sometimes within the calvaria or laid beside the skull. No doubt, with a flint knife, a T-shaped incision was first made. Then, according to Broca, the bone was scraped, and through the disk of bone removed. Occasionally two or three openings were made on the living subject. Dr. Prunières has in his collection twenty skulls, which had been trephined, and with but one exception all recovered.

It is wonderful how successful the prehistoric surgeon was, considering his oftentimes filthy surroundings, crude instruments, methods of operating, and the usual careless way uncivilized men take care of their sick and wounded. So far as present discoveries seem to indicate, they seldom lost a patient.

Out of these pieces of the cranium amulets were made; the fragment of bone was circular, or of other shapes. These ornaments were talismans to protect the person from evil spirits in this world, and the departed soul in the next. The posthumous amulets always had a piece of the "cicatrized edge of the original opening" attached to the bone of which they were made. This fact proves, beyond all dispute, that the individual had lived a long period after the operation.

History from times remote is full of facts concerning certain nervous diseases, which have been called demons, evil

spirits, etc. Such cases were either convulsions, delirium, epilepsy, or madness, due, no doubt, to various causes incident to the modes of life of the individuals so afflicted. Sometimes these diseases were considered sacred, and at others were viewed with superstitious awe—the family supposing that a devil possessed the sufferer's soul. The primitive surgeon treated these cases by trepanning, in order to allow the demon to escape from the living person, through the opening made in the skull. As epilepsy, and particularly convulsions, are common amongst children, this fact would seem to account for the frequency of the number of children's skulls found that have been trephined.

Amongst the ancient inhabitants of the Canary Islands, "The Mound-Builders of America," the oldest tribes of Mexico, of South America, and in the dolmens of Algeria, Africa, and, no doubt, Asia, to say nothing of the sunken continents upon which tradition says our race once dwelt, the operation of trepanning, at some advancing period of the race, towards a higher and more enlightened civilization, was frequently resorted to in order to cure disease. *Therefore, from evidence already given, trephining is the oldest surgical operation of any magnitude that was performed. In fact, it can be said to have been universally adopted in all ages of the past, as well as in our own times, as a recognized operation for the relief of diseases and injuries of the skull and its contents.*

For further particulars, relative to the history of trephining, etc., I refer to the writings of Broca, the Lartets, Dr. Prunières, N. Jolly, Lubbock, Figuier, Smithsonian Reports, Foster, and other authorities, from whom I have quoted the foregoing facts. I thought in presenting the history of a case of fractured skull, it might be of interest to show the antiquity of this operation, which was hoary with age when the ancient traditions of Egypt had not yet been born. So far as diseases, injuries of the skull and brain, and the operations performed for their relief, I refer you to the literature of medicine.

On October 6th, 1890, I was called to see John W., white,

laborer, aged 21 years. He had been injured about 4 P. M. of the same day while pushing a loaded car across a heavily iron-plated floor, which gave way, precipitating him into the cellar, fifteen feet below. I found him suffering slightly from shock; countenance pale, conjunctivæ injected; pulse 120, respiration normal. There was a wound on the scalp an inch and three-fourths in length, with depressed and impacted fracture of the skull—the angle of depression being exceedingly sharp.

Drs. Sothoron and Mackall were called in consultation. The wound was cleansed and irrigated with a solution of mercuric bichloride 1:2000; insufflated boracic acid and dressed it with borated absorbent cotton, retaining the dressing in place with a capeline bandage. At the time I saw Mr. W. all hæmorrhage had ceased. Small doses of bromide of potassium were given every two hours.

6 P. M.—Face slightly flushed, conjunctivæ injected. Gave tincture of aconite root, in drop doses, every two hours; also a purgative of blue mass, and compound extract of colocynth; applied ice-bags to his head, and allowed him small quantities of beef tea and milk every two or three hours.

9 P. M.—Pulse 100, strong, but compressible; temperature 102.6°.

Midnight.—Pulse 90, hard and bounding; temperature 101°. The family stated that about 11 P. M. the patient had been "slightly delirious."

October 7th—8 A. M.—The patient had rested well during the night. Pulse 96, and very strong; temperature 102°. There had been two evacuations from the bowels.

11 A. M.—Drs. Mackall and Sothoron in consultation. Temperature, 101°. Condition unchanged; treatment continued.

Midnight.—Complained of pain on the left side of the head, and over the seat of injury. Pulse 86, and full; temperature 101°; respiration irregular, being 18 to 20 to the minute. The inspiratory movement was exceedingly short, while that of expiration was prolonged.

October 8th—8 A. M.—Complains of pains in the head, also the hip. Pulse 92, intermittent and irregular at times; respiration 18 to 20 to the minute, being deeper and longer in duration; temperature 101.6°.

11 A. M.—Drs. Ford Thompson, Mackall, Sothoron, and myself in consultation. It was decided not to operate, as the patient was doing as well as could be expected; but

should any unfavorable symptoms arise, he was to be operated on immediately. Dr. Thompson stated, had he been called in on the first day he would have operated at once, as the fracture was of that kind of injury that "decidedly" needed trephining; but under the circumstances he would wait further developments. He was of opinion that the man could not live, as the fracture was a sharply depressed one. The wound was irrigated with a solution of mercuric bichloride 1:2000. Iodoform was dusted on the wound, and layers of iodoform gauze were placed over the seat of injury, which were held in place by a bandage. The wound, when opened, was healthy in appearance, no odor being present.

5.30 P. M. Patient complains of increased pain over seat of fracture, since the dressing. Pupils normal and respond promptly to the light. Pulse, 96; temperature, 101°. The bowels being constipated, a teaspoonful of Rochelle salts was given in a cup of water every hour until they acted.

10.30 P. M. Complains of pains on the opposite side of head "as if needles were sticking" him. Pulse, 82 to 86 a minute; temperature, 100°. Has been sleeping.

8 A. M., Oct. 9th. Slept well during the night. Pulse, 80, soft and regular; temperature, 99.4°; respiration, normal. Has no pain, and is perfectly comfortable. Bowels have been evacuated twice.

11 A. M.—Drs. Sothoron and Mackall, in consultation. Pulse, 76 to 80; temperature, 99.8°; patient's condition, about the same as in the morning; has had one operation since last visit; tinct. aconite every four hours: treatment continued, with ice cap, etc.

5½ P. M.—Pulse, 80; temperature, 100.2°; there has been no change since 8 A. M.

10½ P. M.—Pulse, 76, and soft; temperature, 99.4°; patient was sweating; and had two watery operations from the bowels.

8 A. M., October 10th.—Pulse, 80; temperature, 99°.

At 10:30 P. M., patient about the same as yesterday.

8 A. M., October 12th.—Pulse, 68 to 72; temperature, 98.8°.

11 A. M.—Drs. Sothoron, Mackall, and Ford Thompson, in consultation. Temperature, not taken; pulse, 60, and irregular; decided to operate on the next morning.

10½ P. M.—Pulse, 60; temperature, 98°; no change.

8 A. M., October 13th.—Pulse, regular, and 60; tempera-

ture, 98.5° ; bowels have moved; no change in his condition.

11:20 A. M.—Drs. Ford Thompson, Mackall, and Sothoron, in consultation. Chloroform was administered, the patient coming under its influence slowly. After the usual antiseptic precautions had been taken, Dr. Thompson made an incision three-fourths of an inch in length, at right angles from the centre of the wound, extending backwards. Retractors were used, and the trephine applied. The fracture was found to be worse than we had anticipated. The internal plate of the frontal bone was shattered for some distance below the opening made by the trephine, which had been used immediately over the seat of the fracture. The fracture was situated above the frontal eminence, and measured an inch and three-fourths in length, extending downwards and outwards. The upper angle of the fracture was at the end of a line nearly four inches in length, drawn from the internal angular process of the frontal bone. The lower angle corresponded to a point above the outer fifth of the orbital arch. Some fifteen to twenty pieces of bone of various sizes were removed, none of which were very large. A small clot of blood was found between the skull and dura mater. The wound was irrigated with a solution of mercuric bichloride 1.2000. Iodoform was dusted into the opening, and layers of iodoform gauze were laid over the seat of operation, held in place by a bandage. Re-action good; the pupils were dilated.

4 P. M.—Was sent for in haste, and found the patient's temperature 99.4° ; pulse, 80, and regular; complained of pain over the seat of the wound; had a chill, so the family stated, about half an hour before; the hands, feet, limbs and back were cold to the touch; hot irons and bottles filled with hot water were laid along the limbs and the back; hands, limbs and feet had been rubbed; mustard plasters had been applied to the wrists before my arrival; I found the body warm to the touch, and likewise the feet.

$8\frac{1}{2}$ P. M.—Pulse, 83; temperature, 99.4° ; bromide of potassium was ordered to be given if necessary.

10:30 P. M.—Pulse, 84; temperature, 99.4° ; vomited once since last visit; feels badly, and complains of pain in the head; says if he "could rest he would feel better;" the head is very sore over the seat of the operation.

8 A. M., October 14th.—Patient rested well during the night; still complains of pain in the head near the seat of fracture; pulse, 66; temperature, 99.8° .

11 A. M.—Consultation. Pulse, 72; temperature, 96.8° ; pupils very slightly dilated, and respond readily to light; complains of pain over the seat of injury, and also in the eyes; appaaranze of the tongue improved; pulse indicates cerebral irritation; refused to take nourishments.

From the time I first saw the patient until now he had never been unconscious, nor had he complained of any other symptoms than those already mentioned.

$10\frac{1}{2}$ P. M.—Pulse, 66; temperature, 98.8° ; pulse alternately contract and dilate to light; patient conscious, and still complains of pain at the seat of injury.

11 A. M., October 15th.—Wound perfectly healthy; irrigated with carbolized solution, and also mercuric bichloride 1:2000; dressed with iodoform and bandaged; diet, beef tea, etc., as previously mentioned.

8 A. M., October 16th.—Pulse, 64—increased in tension, and in volume; temperature, 98° ; patient slept well during the night, and says he feels better than yesterday.

8 A. M., October 17th.—Slept soundly during the night, and is feeling better to-day; pulse, 60; temperature, 98.6° .

$10\frac{1}{2}$ P. M.—Pulse, 60; temperature, 98.8° ; the man is doing nicely.

10 A. M., October 22d.—No change; wound full of healthy pus; a solution of mercuric bichloride 1:2000 was used to cleanse the wound; iodoform was insufflated, and absorbent cotton saturated with carbolized oil applied, the wound granulating rapidly.

10 A. M., October 24th.—Patient is much emaciated; has no pain nor unfavorable symptoms; wound dressed; found it granulating rapidly, and improving in appearance, being perfectly healthy; the quantity of pus discharged and found in the wound was small in comparison with the two previous dressings.

$10\frac{1}{2}$ A. M., October 26th.—Wound dressed; healthy in appearance, and filling up rapidly; very little pus had been discharged.

10 A. M., October 28th.—Pulse, 74; temperature, 98.8° ; wound healthy; more pus discharged than on yesterday.

10 A. M., October 30th.—Patient doing well; pulse, 64; temperature, 98.3° ; considerable pus is being discharged; wound healthy in appearance, and healing rapidly.

10 A. M., November 5th.—Pulse, 70; temperature, 98.5° ; patient is taking beef tea, milk, etc., in large quantities; allowed to sit up; small sinus one-fourth of an inch in diam-

eter, which is discharging pus, is all that remains of the wound.

Condition remained without note until January 13, 1891, when he came to my office, stating that one week ago several very small pieces of bone had come out of the opening in the skull. I removed a small fragment of bone, and the next day carried him to Dr. Thompson's office, who removed a number of small pieces of bone from the opening in the skull. He then curetted out the unhealthy tissue. After some days, the wound again closed. On January 28th, I removed another small piece of bone. On the 10th of February, the wound had entirely healed.

The man is now at work, and has had no bad symptoms since the last time I saw him at my office.

1909 *Pennsylvania Ave.*

ART. V.—The Truth About Tuberculin.

By **KARL von RUCK, B S., M. D.**, of Asheville, N. C.,

DIRECTOR WINYAH SANITARIUM FOR DISEASES OF THE LUNGS AND THROAT; MEMBER
OF AMERICAN CLIMATOLOGICAL ASSOCIATION; OF AMERICAN PUBLIC
HEALTH ASSOCIATION; OF AMERICAN MEDICAL ASSOCIA-
TION; OF NORTH CAROLINA STATE MEDICAL
SOCIETY, ETC., ETC.

In the *Medical Record* of August 1st, Dr. J. W. Stickler endeavors to tell "the truth about tuberculin," by fourteen assertions, without, however, adducing evidence for their correctness. If the assertions he makes are the results of his personal experience, all that can be said is, that it is to be regretted that the author did not discontinue the remedy sooner, and inquire into the causes for the disasters which his conclusions imply.

Certainly, there is a serious discrepancy in Dr. Stickler's conclusions, as compared with many accurately reported series of cases and results, while much may depend upon individual judgment and use of a remedy and the class of patients treated, as to the outcome of the treatment, yet, in view of his assertions, there must be terrible blunders somewhere, either with Dr. Stickler, or with many others who have come to exactly opposite conclusions.

Dr. Stickler's first truth is, that it does not cure pulmonary tuberculosis in either its primary or advanced stages.

I will not even discredit this truth myself, although I have reported seven cases apparently cured, and can add three others, and no relapse has taken place in any of them as yet, nor in any of the twelve cases reported in classes A and B of my paper, read before the American Medical Association May 7th (*Therapeutic Gazette*, June 15th, 1891), in which the twenty-five cases are accurately described, because my cases were treated under the additional influence of climate; and frequently other aids were made use of, and the work was done in an institution where improvement and cure had followed our efforts heretofore without tuberculin.

I take it for granted that, in addition to unfavorable comments, the interested reader has also noted the favorable ones and the good results published in this country; and, for brevity, I abstract only from some perhaps less accessible foreign journals of the last few months, some of the results which have been accomplished in Europe, in which many of the reporters, in addition to their claims, have given accurate data by which to judge of the correctness of their conclusions, or have shown the patients themselves.

Professor C. Langenbuch, Director of the Lazarus Hospital in Berlin, and Dr. P. Wolff, First Assistant in that institution, report ninety-nine cases in all stages of pulmonary tuberculosis in the *Deutsche Med. Wochenschrift*, July 23, their experience covering the entire period of eight months since the first introduction of tuberculin. They appear to have abandoned the large doses after a very short time, and emphasize the use of minute and slowly increasing doses to the avoidance of febrile re-actions, and show, as results, thirty-three cases recovered, forty cases improved, five cases stationary, twenty-one having grown worse and died. Fifteen of these cases were very far advanced, and all died; in the moderately advanced cases, out of eighteen five died; whereas, out of thirty-five comparatively early stage cases twenty-one are considered cured, four practically arrived at a cure,

five were much improved, and five improved—there being not a single case which did not recover or improve in this class, treated in a hospital in the winter months in Berlin, and without more experience in the use of the remedy than was obtainable by other experimenters. Of the ten cases reported as improved only, the treatment was short; in one case was it only three months; in another, between two and three months; in one case, a month; in four others, less than one month; and three are still under treatment; one less than two months, and one less than a month.

Professor E. Maragliano, of Genoa, Italy, reports (in the *Berliner Klinische Wochenschrift*, June 15th, 1891,) five cases in the early stage, of which four are considered cured; the fifth continued treatment for but a short time, and no change occurred one way or another.

Dr. A. Schwartz, City Hospital, Fellin (Liveland), reports (*Deutsche Med. Wochenschrift*, July 16th, 1891,) twenty-nine cases. Of twenty cases in the earlier stage, three are apparently cured; and in ten cases there is steady and continuous improvement, being still under treatment; in two cases the previous unfavorable course of the disease continued; in five cases, there was no material improvement. Of nine far advanced cases, four were greatly improved; in two cases the improvement continued; and two cases again relapsed. (He pursued the old method of treatment under febrile reactions, etc.)

Dr. R. Stintzig reports (*Muenchner Mediz. Wochenschrift*, Nos. 9, 10 and 11,) seventy-three cases in all stages, of which eleven apparently recovered, thirty-one cases are improved, five remain stationary, twenty-six grew worse or died. (Old method with febrile reactions, etc.)

Dr. Grabauer, City Hospital, Moabit, Berlin (*Deutsche Mediz. Wochenschrift*, July 9th, 1891), reports forty cases of tubercular laryngitis, of which eight are recovered, fifteen greatly improved, five stationary, four grew worse. (Old method of treatment until March; since then, minute doses with avoidance of general re-actions).

Dr. H. Heuck, Erb's Clinic, in Heidelberg, reports (in the

same journal, June 4th), eighty-four cases in all stages, of which one is considered cured, eleven greatly improved, eighteen improved, twenty-one are stationary, twenty-one grew worse, eight died. (Old method with general reactions.)

Dr. Michelson reports, in the same journal of May 21st, three case of tuberculosis of the upper air-passages—all successful.

In the same journal of May 14th, Professor Kleinwächter reports the further progress of twenty cases of pulmonary and laryngeal tuberculosis which were included in his official report of December 30th to the Government. Of the early and moderately advanced, thirteen cases, three recovered, nine are greatly improved, one was treated only two weeks; of seven far-advanced cases, two are materially improved, three are stationary, and two continue to grow worse. (Old method of treatment with general reactions).

At the Tenth German Congress for Internal Medicine, Dr. von Jaksh reports thirteen hopelessly advanced cases, in one of which the laryngeal tuberculosis healed. Of eighteen less advanced cases, twelve improved; in six the disease progressed, but all cases (number not stated) in an early stage showed great improvement, one case being considered apparently cured. (Old method with general reactions.)

Dr. Moritz Schmidt, of Frankfurt, reports thirty-nine cases of laryngeal tuberculosis; of twenty without destructive ulceration, fourteen are considered cured; of twenty-two advanced cases, six are considered cured and one case improved.

Dr. Fuerbringer, in over 100 cases in all stages, reports five per cent. apparent recoveries, forty per cent. extraordinary improvement, thirty-five per cent. slighter improvement, and in twenty per cent. no improvement. (Old method until recently; since then avoidance of general reactions.)

Dr. Cornet reports 278 cases, but will not yet speak of cures. He has, of light cases, sixty-five per cent. materially improved, and thirty per cent. very greatly improved; of severer cases, the percentage is given as sixty-four and

four; in severe cases, forty-one and three; and in very severe cases, sixteen and one per cent. respectively. Four per cent. of the cases died, all of which were hopelessly advanced before treatment was undertaken. (Old method, with general reactions.)

Dr. Turban, of Davos, reports fifty-three cases; in forty-five both lungs were involved, in thirty-seven cases cavities were diagnosed, tubercular laryngitis co-existed in six; of these cases, forty-seven are improved, one grew worse and died; in fourteen cases the bacilli disappeared permanently, in eleven cases almost entirely. Almost every case improved in weight and general health. (Old method, with general reactions.)

Dr. Steinitz, of Jena, saw in 130 cases in all stages five relative cures, and fifty per cent. of very great improvement.

Dr. Rosenfeld, Diakonissen Hospital, Stuttgart, reports fourteen early stage cases, with four apparent recoveries; ten cases still under treatment, and all improving; in three advanced cases, two improved; in four hopelessly advanced cases there was no result. (Method by minute doses, without general reactions.) He concludes that the remedy, properly applied, will cure the early stage of pulmonary tuberculosis.

Dr. Heubner, of Leipsic, reports five cases of severe scrofulosis in the later period of childhood, with unusual improvement, and recommends the remedy as a prophylactic in such cases.

From the Government Hospital, in Alexandria, the report is, that the results are very satisfactory. (*Deutsche Med. Wochenschrift*, April 16, 1891.)

Prof. Von Ziemssen is reported in the discussions of the Congress to have had experience in over 100 cases, and has seen frequent relapses under the large doses, with general reactions. Since following a more conservative method, the continuance of improvement was much better. Many of the apparently recovered and improved cases which he has discharged, have since continued well, or have improved at home.

Dr. Stricker, Chief Staff Physician in the German Army, at a session of the Charité Physicians, Berlin, showed twelve cases apparently cured, and stated that a number of his other cases were progressing toward a cure. He then successfully challenged the Berlin profession to show one single case, or to point to one in the past, in which, at that season of the year, in the city of Berlin, such a result as he showed in the twelve cases had been obtained, stating that if one such case could be shown, he was willing to consider his results under the use of tuberculin as chance and accident.

As to the *unfavorable experience* with the remedy, I may note particularly the paper of Dr. N. Senn (*Chicago Medical Record*, June 15, 1891), and refer only to pulmonary cases. In general, the data of these are very incomplete. In the majority of them no statement is given of pulse, respiration, temperature, body weight, amount of expectoration, vital capacity, microscopical examination, nor even of the auscultatory phenomena, either upon admission or discharge; in many of them it does not state how long the particular patient was treated—only that the treatment averages about four weeks—a very short time, indeed, for correct conclusions.

Let any one, however, examine the description of these cases somewhat critically, and in the light that the general reactions show the production of an excessive effect of the remedy and should have been avoided, and he will see that cases treated less than a month can hardly be used for evidence of the value of this or any treatment of a chronic serious disease like pulmonary tuberculosis—that acutely progressing cases or such with well marked softening and hectic symptoms, and all far advanced cases are unsuitable for the treatment; and he will find that almost all received decidedly too large doses, and on that account the disease was aggravated in cases Nos. 1, 2, 4, 8, 9, 14, 17, 24, 27, 31, 37, 39, 42; that the cases were hopelessly advanced, or probably unsuitable for the treatment in Nos. 5, 8, 15, 20, 21, 22, 25, 26, 28, 29, 30, 34, 36, 37, 38, 40; that the time of treatment, where it is given, was so short that no improve-

ment could have been expected, being frequently only two weeks, as, for instance, in cases Nos. 3, 7, 15, 23, 32, 33, 35; that even the improved cases were treated a comparatively short time only, as in case No. 10, several weeks; No. 12, ten weeks; No. 16, four weeks; No. 33, four weeks; No. 41, four weeks; No. 43, six weeks.

I would like to know what, under such circumstances, could have been expected from this method or any method of treatment. Did the author of the paper expect the miraculous to happen? Had he titled his paper, "Away with Hopelessly Advanced Cases and Overdosage," it would have been more in conformity with logical reasoning from his results. To me it is a surprise that the treatment was attended by any improvement at all; and to the careful student of these cases it must appear, that with greater experience both in dosage and selection of cases, even in an unfavorable climate, and in a city hospital, much can be accomplished with the remedy. In the milder cases the author claims improvement in several instances in so short time as a month or even less in seven cases, and two cases he reports as apparently cured.

In neither of the latter is the claim "apparently cured" justifiable by the data, and such cases in my reports are classed as greatly improved. Out of eleven cases, seven were influenced favorably by the treatment, and in a very short time. In twelve advanced cases, improvement is said to have followed five times. Under proper selection of cases and dosage, and under painstaking general management and continuance of the remedy, it would not be unreasonable to expect the results much better, and I doubt not that with the advantage of a favorable climate in addition, the results reported by Dr. Senn could have been equal with my own, or those of others.

It would not be unfair to ask Dr. Stickler if all observers who have seen good results and no disasters are mistaken, or insincere, or what he will make of their evidence?

What will he do with my own cases; or with the results reported by other observers in this country, from the first paper by Dr. Jacobi, to the last published by Dr. Den-

nison? Does this justify his second assertion of the truth, "that if administered during the primary stage, it is apt to hasten the progress of the disease, unless he wanted to say 'the progress toward recovery' "? And the third "Truth," that in the advanced stage, it hurries the patient into eternity? He may have so hurried some of his cases, perhaps, by accepting them for treatment when only a miracle could have saved them, or by improper dosage and management. But I will only remind him that all far advanced cases of pulmonary tuberculosis are candidates for eternity, and that most of them are apt to arrive there in the near future.

As to his fourth "Truth," I can say that if he will use enough caution, and with the stethoscope watch for local re-actions, beginning with 1-10 of a milligram, and never increasing by more than that amount after the last two doses given have had no apparent effect whatever, he will rarely find a patient who will have an unpleasant symptom—never one who will suffer distress.

His fifth "Truth" can be only the result of improper dosage. Necrosis is not the object of tuberculin—at least, not in the present light of our knowledge on the subject—and with proper administration it is not induced. On the contrary, it is prevented, when not already established or about to occur in the ordinary course of the disease.

His sixth "Truth" is demonstrated to be the result of necrotic and suppurating processes produced, also, as already stated, in the natural course of the disease; and when so present, the patient is not a suitable one for the treatment; under tuberculin treatment its production may result from overdosage.

His seventh "Truth" deserves more consideration. A remedy which, he admits, produces apparent temporary improvement, and which, in other hands, has produced such lasting results as I have obtained, and as the medical literature is full of, and which the above cited authorities corroborate, is evidently improperly used or applied, if a particular observer uniformly fails to secure a greater permanency—unless in far advanced, or such cases where this may be the

limit of improvement possible. I would particularly refer him to what von Ziemssen, a most reliable and well-known observer, stated on the subject of relapses.

I would remind the author of this "truth," that one of the greatest features in the successful treatment of pulmonary tuberculosis, is the prevention of relapses, which pave the way to the consumptive's grave. Relapses have occurred, and were common enough before tuberculin was discovered; and to prevent them, we must first understand their causes, which are various, and depend, as a rule, upon errors of diet, over-exertion and indiscretions of the patient, or upon improper advice and management by the physician. If we find them due to the use of tuberculin, it is better to learn how to avoid them, than to regret the improvement already produced by the remedy.

The eighth "Truth" may be disproved first, by clinical experience—no such disaster having been experienced, unless by the author, and the diagnosis need seldom be made with the remedy. In the majority of the cases I have seen reported, its need for that purpose occurs seldom indeed. I have already pointed out in my paper, previously referred to, that it should not be so used, unless to exclude tuberculosis, when this is important. It has, however, been found that the confirmation of the diagnosis in a doubtful case becomes evident in the course of treatment with *minute* doses, by the occurrence of local re-actions; and the large doses which were first given for diagnostic purposes, are entirely unnecessary, although even with them, I am unaware of such results as the author would frighten us with.

The ninth "Truth" I would like to answer by asking the author if he has ever prescribed creasote, arsenic, morphia, strychnia, phosphorus, atropia, etc., for tubercular patients; and if any of these destroyed the tubercle bacilli in his patients? Is it not true that many of our remedies in certain doses exhibit a poisonous action? And yet we frequently make use of them in therapeutic or physiological doses for the cure of disease.

Tuberculin, too, has its therapeutic and physiological

dose, which the profession is just about beginning to find out. In more than 2,000 doses administered by me, I have been so fortunate as to avoid any effect of poisoning with the remedy, and I have personally told the author that I considered doses which produced fever and general symptoms, as overdoses and poisonous, as early as last February, and before he, to my knowledge, made use of the remedy.

The tenth "Truth" may hold good with the remedy in the hands of some particular experimenter, and when given in overdoses. It is contrary to the experience of the authors whose reports I have above summarized; and in my own hands in over forty cases and 2,000 injections, it has not done any harm at all, and has, after a short experience with it, not even caused discomfort of any kind.

The eleventh "Truth" is negatived entirely by the results referred to; and I challenge the author to point to any single remedy, or to any combination of remedies at our command where half, or even a fourth, of the number of improvements and apparent recoveries have been produced, and are as clearly referable to the treatment as is the case with tuberculin, even in its experimental period, and as we now know under a wrong theory of its action, and frequently in overdoses.

"Truths" twelve and thirteen refer to surgical cases and lupus, and do not concern me, but could be easily answered like the others.

As to "Truth" fourteen, I have so used the remedy with the happiest results; so it has been used by Prof. Dennison, of Denver, and by a number of others, and is still being so used, and advised to be so used by Prof. Loomis and Dr. Jacobi, in New York, and other eminent authorities.

I know of no compilation of statistics which would justify the statement that the great majority of observers who used the remedy sufficiently say, that they have failed to obtain gratifying results. Let the reader remember the great mortality of the disease, the usual downward course, under all present methods of medical treatment, the advanced stages under which the majority of cases were sub-

jected to tuberculin injections, the importance of continued proper management for the prevention of relapses; and then let him remember that there would probably be no remedy on earth with which a hundred physicians would obtain equally good results; that much would depend upon the material used, the personal equation, the ability of assistants in hospitals, etc. Let him also remember that, with few exceptions, the remedy has heretofore probably been applied in too large doses—at least in a majority of cases; and that we are barely emerging from the experimental stage. And to the author of these fourteen "Truths," I would say that if he would like to see a cured case of pulmonary tuberculosis, or cases which are rapidly and steadily improving, under the use of tuberculin, I can gratify his wishes.

Finally, it seems to me that no benefit can result to scientific medicine, or experimental therapeutics from simple assertions. The day has passed when even the general practitioner should be asked to accept statements without the accompanying evidence to show upon what basis these statements rest, no matter how well known the writer may be.

In the experimental stage of a remedy, where everything has to be learned, and so much depends upon the mode of its employment, the proper selection of cases, and concomitant conditions, all general assertions must be thrown out, and an accurate and detailed statement of everything pertaining to the cases and their treatment must be furnished by which the intelligent practitioner prefers to judge of the value, dangers and best modes of its employment, and of the correctness of the author's conclusions. No physician is desirous of using remedies which do no good, and much less so if favoring disaster.

Tuberculin may, indeed, not come up to the hopes and expectations of those who, by its routine employment, expected to speedily cure pulmonary tuberculosis in all its stages. With my experience, and desirous of being conservative, I can endorse every word of Dr. A. Jacobi before the New York State Medical Society, when he said: "Altogether

tuberculin has proven a remedy of great power for good, and for possible evil." "What it has done and can do is more than any other remedy, except climatic treatment, in pulmonary tuberculosis, and surgical treatment in select cases of local tuberculosis, has succeeded in accomplishing." "From what little I have observed, it would appear that the near future of successful treatment of pulmonary tuberculosis consists in the combination of climatic cures with a careful and persistent use of tuberculin." "That is what we have to be thankful for at even this early date."

The possible evil Dr. Jacobi referred to is manifest in Dr. Stickler's use of the remedy, and in other injurious results which attended inexperience in its use. *The facts* in connection with adverse experience, honestly reported, are, however, as useful to a full understanding of the ultimate intelligent and successful employment of the remedy, as are the reports of successful cases.

Clinical Reports.

Report of a Successful Herniotomy.

By R. H. GARTHRIGHT, M. D., of Vinton, Va.

Wilson Harvey, colored, aged forty-five years, has suffered for a number of years with a scrotal hernia. It has become strangulated several times during the past twelve months, but there has been no very great difficulty in effecting its reduction.

On the evening of July 8th, 1891, I was called to see him. He informed me that just before my arrival the hernia descended. He was suffering from a slight diarrhœa, took off his truss and went to stool, when the gut passed through the right internal and external abdominal rings into the scrotum. The bag was tense and hard, and about as large as the head of a new-born baby. I administered chloroform and used taxis for some fifteen minutes. Finding it availed nothing, I sent for Drs. G. T. Walker and C. D. Eubank. We placed him on an incline, rubbed a mixture of lard and kerosene oil over the hernial sac, chloroformed him, and applied taxis again with no success. We

then concluded to give him a rest. At 10:30 P. M. a hypodermic of morphia, $\frac{1}{4}$ gr., and atropia sulph., $\frac{1}{100}$ gr., was administered, and a mixture containing chloroform and morphine left, with directions to give him a dose every three hours through the night. At five o'clock A. M. of the 9th, I called and found him comparatively comfortable. He slept several hours during the night with his head downward. The hernia was not as tense as it was the night before. I gave chloroform and used taxis again with the same result as on the previous evening. Dr. Richard W. Fry, of Roanoke, was then called in consultation. The patient was chloroformed again, and Dr. Fry attempted reduction and failed. He suggested the use of cold as a relaxant. A bladder filled with ice was applied over and around the hernial sac, and left in place for one hour, then chloroform re-administered and taxis used, but the strangulation remained as before. Dr. Fry then, at my request, proceeded to perform herniotomy. Present, Drs. G. T. Walker, C. D. Eubank, and myself.

A free incision of about four inches was made through the integument, and then the cellular and other tissues were carefully dissected down to the intestine, the stricture enlarged about a half inch, and the hernia reduced. Because the hernia was one of long standing and the rings very large, it was deemed best simply to close up and stitch the integument. This was done by sutures of iron-dyed silk rendered thoroughly aseptic. Iodoform was sprinkled over the wound and a spica bandage applied; over it all; the truss was placed; patient put on his back with his hips somewhat elevated, and directed not to get out of that position. He was given a small quantity of milk at intervals of three hours during the afternoon and night.

Several hours after the operation he suffered from nausea and vomited twice. I visited him at nine P. M., and gave $\frac{1}{6}$ gr. morphia hypodermically, and left a mixture containing $\frac{1}{16}$ gr. morphia for each teaspoonful, one teaspoonful of which was given at one A. M. He slept well. On the morning of the 10th his temperature registered 99° , pulse 70. At seven P. M. the same day, temperature 100° , pulse 72.

11th. Eight A. M., pulse 68, temperature $98\frac{3}{4}^{\circ}$. At seven P. M. he felt a slight desire to defecate. Pulse then 72; temperature $99\frac{1}{2}^{\circ}$. Soon after eight o'clock he had a good action from bowels, and slept well. On the 12th, his symptoms were similar to those of the preceding day.

Dr. Fry met me on the afternoon of the 13th, and we dressed his wound. It presented a good appearance. No suppuration was present, and only a small amount of tenderness and swelling around the wound. The edges had not united sufficiently to remove the sutures, so we left them and used a dressing similar to the one used at first.

The ice-bag was left off. We gave him two drachms sulphate of magnesia, and twenty drops dilute sulphuric acid at night, and in one hour afterwards his bowels moved.

15th. Had a comfortable night. Temperature at eight this morning was normal, and pulse 70. Up to this time he has been kept on a diet of milk with a little chicken broth occasionally. He is allowed to-day a little rice and bread in addition.

July 23rd. Patient feels well enough to go out. The wound has almost healed. He will be kept in bed a week longer, when he will be allowed to walk about the house.

Proceedings of Societies, Boards, etc

MEDICAL AND SURGICAL SOCIETY OF DISTRICT OF COLUMBIA.

[DR. LLEWELLYN ELIOT, Reporter]

Compound Fracture of the Skull.

In discussing Dr. Morgan's report of a case of "Compound Fracture of the Skull" (see page 459), Dr. J. T. Sothoron said, that in view of the favorable outcome of trephining, one might be inclined to criticize the delay in performing it for such a time as was done. But although the outer table was depressed deep enough to lead one to suppose that the inner table was likewise depressed, there were no symptoms of pressure—not even vomiting; and though the question of operative procedure was considered, it was further deferred, even after Dr. Thompson was called into the case.

Dr. L. Eliot did not desire to question the motives or the ability of the physicians who were in the case, but he would differ with them as to the propriety of such a delay in adopting operative measures. In all fractures of the skull with depression, the treatment is to relieve the pressure at once. As he understood it, both the external and the in-

ternal tables were splintered and pushed in under the sound bone. If so, what was the use of giving aconite and the bromide of potash, since they would but mask the symptoms we would look for in such a case? His experience had been, that in all immediate trephining, the patients recovered without epilepsy, headaches, visual or brain lesions, or, in fact, any complication; while in those in which the operation was delayed, or not performed at all, the cases either died, or afterwards exhibited nervous or brain lesions. The statistics of the late war show the results of nine hundred operations for injury of the head, with a mortality of 56.6 per cent. in two hundred and twenty cases of trephining; but in some of these cases, the depression was not discovered for two or three weeks after the injury was received, and were then operated on only by reason of the urgent symptoms. This fact has its bearing upon the value of these statistics. In such cases as the one under discussion, he would advocate an immediate operation, without waiting for symptoms.

Dr. F. B. Bishop asked, if Dr. Eliot would convert a simple fracture into a compound fracture, where there were no symptoms of pressure?

Dr. Eliot replied, that he would not if it was a "simple" fracture; but where a depression is detected, he would do so, and in the present case there was a hole large enough to put in the fingers. The operation is not what it used to be—trephining is now being done for fracture of the base of the skull, to remove pressure from blood that is present—with what result remains to be seen from the cases which will accumulate in time.

Dr. Ford Thompson said, had he seen the case at first he would no doubt have operated at once; but after forty-eight hours had elapsed without the appearance of symptoms of compression, he saw no danger in further delay. He was prepared to operate at any time. The statistics of the surgery of the war are not reliable guides for civil practice, as regards the mortality after trephining, as the operations were performed under the most unfavorable conditions, and for injuries frequently necessarily fatal. Antiseptic surgery has revolutionized these statistics. He would operate in any case of fracture, simple or compound, where there was depression, and in any case with pressure symptoms, whether he could detect fracture or not. He does not think the operation for fracture of the base of the skull will come into general use.

Dr. F. B. Bishop said, he had a very serious case last summer of a child ten years of age. The consulting surgeon concluded to wait. It was a very bad simple fracture, but the child now enjoys good health, although the back of the head is flat.

Dr. J. W. Bovee suggested that Dr. Morgan had probably done so much good with the aconite, that he cloaked the very symptoms he was expecting to find.

Dr. F. T. Chamberlin did not see how the use of aconite, as administered, could do harm; and he further remarked that the history of the case showed no indication of harm having been done.

Dr. E. L. Morgan, in closing the discussion, defended the use of aconite in the case reported. He spoke of the therapeutics of aconite and its special adaptability in this case. He was guided in his dosage by the condition of the patient at the time, and gave from one to four drops an hour, and was sure it had done good, as shown by the reduction of fever on the second day, and the encouragement of the peripheral circulation.

Analyses, Selections, etc.

"The Supposed Curative Effect of Operations, Per Se"

Dr. J. William White, of Philadelphia, says (*Annals of Surgery*, August, 1891,) his attention was first directed to this subject by reason of his experience with the operation of trephining for so-called traumatic epilepsy.

During the past five years, with Dr. Hayes Agnew, he has trephined in fifteen cases of supposed traumatic epilepsy. All but one recovered from the operation. The patient who perished was an imbecile and a confirmed drunkard as well as an epileptic. Death occurred from suppression of urine, probably secondary to etherization.

In one case a bullet was found imbedded in the brain substance; in another, an irregular portion of the internal table was dissected out from beneath the dura mater to which it was attached by cicatricial adhesions. In another there were projecting spicules of bone on the internal surface of the button removed and the adjacent portions of the skull. In two, marked sclerosis and thickening of the cranium were observed about the field of operation. In the remaining cases nothing abnormal was seen.

Although this was the case, they were, without exception, markedly improved by trephining—in two instances, even to the point of apparent cure, no return of symptoms having been observed for eighteen months, and for two years after the operation. In the other seven the results were strikingly favorable, convulsions disappearing for weeks or months, although previously of more than daily occurrence.

The author has, in so far as this is possible, classified the cases in which operation *per se* seemed to be the main factor in bringing about a cure. These cases are divided into three groups in accordance with the anatomical seat of the symptoms or of the supposed disease, under the following heads:

1. Operations for the relief of nervous phenomena, as epilepsy, insanity, paralysis, etc.
2. Operations for abdominal and pelvic disorders, as peritonitis, tumors, etc.
3. Miscellaneous operations.

This classification is further carried out by grouping together (a) Those cases in which nothing whatever was found explanatory of the symptoms; (b) Those in which some departure from normal conditions was observed, but was so slight as to be apparently inadequate to explain the symptoms; (c) Those cases in which an apparently grave and irremediable condition was disclosed by an exploratory operation, but notably improved, or altogether disappeared after mere inspection or handling, no further surgical interference having been thought justifiable.

Under the heading of "Operations for the Relief of Nervous Phenomena," Dr. White has tabulated, including his own service, 154 cases.

In fifty-six cases of *trephining for epilepsy*, nothing abnormal was found to account for the symptoms. Nineteen cases were reported in six months or less after operation; eleven cases from six to twelve months after operation; six cases from one to two years after operation; and one eight years after the operation. Twenty-five of these cases were reported as cured; eighteen improved; and in three relapses occurred later.

In thirty cases of *ligations of blood vessels for epilepsy*, fourteen were reported as cured; fifteen as improved; one died seven days after operation. In the fatal case the right common carotid artery was tied. No fit occurred after the operation.

In ten cases of *castration for epilepsy* all were reported as

cured. One case was reported four months after operation; four cases more than two years after operation; in five, the time when reported is not mentioned.

In nine cases of *tracheotomy for epilepsy*, two were reported as cured; six as improved; one as much improved, though death in this case followed in two months after the operation.

In twenty-four cases of *removal of the superior cervical ganglia of the sympathetic nerve*, six remained well at the end of three years; ten were improved; five remained unimproved; two died soon after the operation, but not from its direct effects.

In six cases of *incision of the scalp for epilepsy*, nothing was found to account for the symptoms. Three of these cases were reported as cured at the end of three months or less; one as cured at the end of one year; two as cured at the end of two years; two other cases almost similar were reported as cured.

Twelve cases of *epilepsy are reported as cured by such operations as stretching of the sciatic nerve, excision of the musculo-cutaneous nerve, cauterization of the larynx, circumcision, application of a seton to the back of the neck, tenotomy of the external recti muscles, burning of the scalp, puncture of the heart, etc.*

Thirteen cases of *spontaneous or accidental cures of epilepsy* are also reported, at a time varying from two months to five years after the traumatism, which was a fall, a burn, a wound, an amputation for intercurrent injury or disease, etc.

Passing from the cerebral to the *spinal region*, Dr. White cites an illustrative case of his own. A man, aged 55, was attacked on December 25th, 1887, with severe pains in his arms and shoulders. A few days later there was weakness of the thighs, spreading rapidly down the legs to the feet, and upward on the body to the nipple line. In eight days there was absolute paralysis of the parts involved, including both sphincters, while at the same time the paralyzed parts became the seat of profound anæsthesia. Girdle pains developed, bed-sores made their appearance, percussion of the spine over the third and fourth vertebræ became painful. The reflexes were exaggerated, and light blows on the head in the direction of the spinal axis gave rise to frightful exacerbation of the girdle pains. In spite of every remedial measure, these symptoms increased in severity for ten months. An exploratory operation was then undertaken. Dr. White removed the spines and laminae of the

first five dorsal vertebræ, opened the slightly thickened dura, separated some firm adhesions to the subjacent pia mater, explored the cord, and having failed to discover any serious pathological changes, closed the wounds in the dura and soft parts. The girdle pain had entirely disappeared by the following day; sensation began to return in the feet the day after, voluntary motion in the toes after the eighth day, and so one symptom after another disappeared until the patient completely recovered, and is now earning his living by manual labor.

In the list of *abdominal and pelvic disorders apparently cured by operation per se*, a number of extraordinary cases are cited. The experience of Tait, who has more than once drawn attention to the astonishing disappearance of tumors often of large size, after a mere exploratory incision, and the corroborative testimony of von Mosetig are cited at length. Koenig's analysis of 131 cases of tubercular peritonitis, treated by abdominal incision, is carefully discussed.

Under the heading of *miscellaneous operations* the author has given several of very diverse character.

First are quoted cases of *osteo-malacia*, cured after weeks or months of confinement to bed, by either oöphorectomy or Cæsarean section.

Passing to another subject, the question of *graduated tenotomy of the eye muscles for the relief of severe nervous symptoms* is carefully discussed. The author freely acknowledges the value of tenotomies, both complete and graduated, in the restoration of equilibrium in badly balanced ocular muscles; but he is none the less convinced that in numbers of instances of reported cures of chronic chorea, petit mal, and even delusional insanity, the effect of the operation *per se* is in large measure the potent cause of the supposed cure. This belief is founded not alone on theory, but upon the fact that in certain cases of reflex nervous trouble, a cessation of the symptoms has followed the tenotomy, although this has not produced perfect equilibrium. Again the relapses which may take place after a perfectly successful series of tenotomies, would indicate that the nervous phenomena attributed to the insufficiency, for the relief of which the operations were made, were not correctly so attributed, and that the temporary relief must be ascribed to some cause other than the restoration of an imperfect balance of the external ocular muscles.

In seeking for a reasonable explanation of the phenomena observed in the above cases, the author has formulated the

conditions which are common to nearly all of them. These are:—

1. Anæsthesia.
2. Psychical influence, or so-called mental impression.
3. Relief of tension.
4. Reflex action, or the "re-action of traumatism."

These influences were operative in the majority of cases, although not one of them, except the last, applies to the whole list.

With the idea that it was conceivable that a disease of the nerve centres, not reached by ordinary drugs, might be affected by agents of such volatility and diffusibility as ether and chloroform, the author instituted a series of observations upon a number of epileptics in various stages of the disease. All other treatment was withdrawn; ether was given to the production of full anæsthesia at intervals of from forty-eight to seventy-two hours. The results were either entirely negative, or in consequence of the withdrawal of their bromides, the patients grew worse.

Since, in the great majority of cases upon which Dr. White bases his paper, there were either undoubted symptoms, such as are habitually associated with organic disease, or there was demonstrable and unmistakable evidence of such disease, it is necessary to believe, in considering the psychical influence of operation, that powerful impressions acting upon the emotional or intellectual nature may affect the organic processes of secretion, nutrition, etc., and may arrest pathological changes and bring about reparative or recuperative action. Cases are cited in which such influences are clearly set forth.

The author holds that the normal equilibrium which we witness between the cerebro-spinal and the sympathetic systems, as respects their influence upon the blood vessel, is obviously more or less interfered with when the brain transmits a more than wonted impulse, allowing the unrestrained action or paralyzing the influence of the sympathetic vaso-motor nerve. In this relation the author narrates some remarkable cases of hypnotism, and quotes some striking examples of the effect of the central nervous system upon the body.

Belief is expressed that in many of the cases described, there can be little doubt that relief of tension is an important factor in amelioration or cure. If it is assumed that preternatural tension exists in the cranial cavity, this would be relieved to an extent by trephining, and there would be

but few exceptions to the rule, that in each case something was done which lessened tension in the cavity or organ of the body. There are other cases, however, in which no such relief was obtained, and yet cure resulted from operation. A diminution of the tension would manifestly alter the blood supply to any important organ in the body, and with it the nutritive processes, local and general. Beyond this, nothing definite can be said, except as it applies to cases of ascites, in which, as in cases of hydrarthrosis, one tapping may prove permanently curative, because the original source of irritation and hypersecretion has already disappeared.

Under the head of *reflex action*, the author includes the "re-action of traumatism," as well as the effects of revulsion and counter-irritation.

Verneuil, has long since shown that very slight traumatism sometimes excites in the entire economy, a general perturbation, and sometimes, by selection of the weak point, a sudden aggravation of lesions that are only slight or have slumbered. This same excitement, usually prejudicial, may occasionally be curative. In the case of spinal surgery above detailed, Dr. White believes that the local shock of the operation was promptly followed by a corresponding reaction, in which the vitality of the tissues was raised sufficiently high to determine a return to the normal state. In this relation the reciprocal influence of one portion of the body on another is briefly discussed.

In considering *abdominal tumors*, attention is called to the possibility of the spontaneous disappearance of such tumors, the relation of this disappearance to the operation being co-incidental; cases are cited in point. As to the cure or amelioration of growths thought to be malignant by merely exploratory operation, a long search through the literature of the subject has met with but little success.

The *cure of tuberculosis of the peritoneum as the result of exploratory incision* is explained on the ground that the removal of ascitic fluid allows the peritoneal surfaces to fall together and to acquire adhesions. The tubercles are then shut in between the coils of intestine, the omentum and the abdominal wall. They are thus surrounded by tissues in a high degree of activity, which can now throw around them the limiting zone of young cells, and eventually fibrous tissue, which if the tuberculous process is not too far advanced, may effectually resist it, and may cause it to retrograde; the process being analogous to that which we see imperfectly going on around a cancerous growth.

As a result of a study of the subject, the author believes the following conclusions are warranted :

1. There are large numbers of cases of different grades of severity and varying character, which seem to be benefited by operation alone, some of them by almost any operation.

2. These cases include chiefly epilepsy, certain abdominal tumors, and peritoneal effusions, and tubercle, though the improvement in the latter is, perhaps, to be explained on general principles.

3. Of the possible factors, which, by reason of their constancy, must be considered, anæsthesia seems least likely to have been effective. The other three, viz , psychical influence, relief of tension, and reflex action, may enter in varying degrees into the therapeutics of these cases, and taken together, serve to render the occurrence of occasional cures less mysterious.

4. The theory of accident or coincidence scarcely explains the facts satisfactorily.

Suppurative Seminal Vesiculitis—Its Diagnosis from Chronic Posterior Urethritis.

In closing a very valuable article, Dr. Samuel Alexander, of New York, N. Y. (*Jour. Cutan. and Genito-Urin. Dis.*, August, 1891), calls attention to the method of diagnosing suppurative seminal vesiculitis, which he believes is more common than is generally supposed—he having seen, during the past year, six cases—all of which had been mistaken for chronic posterior urethritis; this latter condition, indeed, is always co-existent. "In order to detect this condition, the examination should be made when the bladder is full of urine. The patient first passes a portion of his urine into a glass; this frees the urethra of all discharge. The surgeon should then introduce his finger into the rectum, and having reached above the seminal vesicle upon the left side, he should press upon it, and endeavor to milk out its contents into the urethra. Having done this, the patient passes a second portion of urine into glass No. 2. The right seminal vesicle is then milked out, and the remaining portion of the urine is passed into glass No. 3. If the left seminal vesicle is inflamed, glass No. 2 will contain pus, a little blood, and spermatic fluid mixed with the urine. If the right seminal vesicle is inflamed, glass No. 3 will contain these elements. In glass No. 1, the discharge from the urethra will be found."

New Remedies—Their Therapeutic Action or Uses, and Posology.

At a recent meeting of the Chemists' Assistants' Association (London,) Mr. H. Helbing presented the following list of those remedies more recently introduced, which we advise our readers to carefully preserve, as they will find it exceedingly useful for frequent consultation. We copy it from *Times and Register*, August 8th; but we should caution our readers that the doses in some instances seem excessive.

NEW REMEDIES.	USES.	DOSES, ETC.
Acetanilide.....	Analgesic and antipyretic.....	2 to 5 grs. per os.
Acetylphenylhydrazin.....	Antipyretic and analgesic.....	3 to 5 grs. per os.
Agaricine.....	Antisudorific in phthisis.....	$\frac{1}{2}$ gr. per os.
Amylene hydrate.....	Hypnotic anodyne.....	$\frac{1}{2}$ gr. to 1 dr.
Anthrarobin.....	Against skin diseases.....	
Antipyrine.....	Antifebrile and anodyne.....	15 to 30 grs. per os. or subcutaneous-ly. [5 to 15 grs.]
Aristol.....	Antiseptic and in skin diseases.....	
Benzoyl-anilide.....	Antipyretic.....	1 $\frac{1}{2}$ to 5 grs. per os.
Benzoylgaicol.....	Antituberculotic.....	4 to 10 grs. per os.
Betol.....	Antigonorrhoeic.....	In bougie.
Bismuth salicylate.....	Against gastric affections.....	6 to 15 grs. per os.
Bromoform.....	Against pertussis.....	1 to 2 min. per os.
Camphoric acid.....	Antisudorific in phthisis, etc.....	30 grs. per os.
Cetrarin.....	Stomachic.....	2 grs. per os.
Chloralamide.....	Hypnotic.....	30 to 45 grs. per os.
Chloralurethan.....	Hypnotic.....	15 to 45 grs. per os.
Creolin.....	Antiseptic.....	5 min. internally.
Creasote.....	Antituberculotic.....	3 min. per os.
Ethylenimine hydrochloride.....	General stimulant.....	$\frac{1}{2}$ to $\frac{1}{2}$ gr. subcutaneously.
Exalgine.....	Analgesic.....	4 grs.
Guaiacol.....	Antituberculotic.....	1 min. per os.
Hydrastinine.....	Against uterine hæmorrhage.....	1 gm. subcutaneously.
Hydroxylamine.....	Against skin diseases.....	Externally.
Hydracetin.....	(See Acetylphenylhydrazine).	
Hypnone.....	Hypnotic.....	3 to 8 min. per os.
Ichthyol.....	Antirheumatic; against sciatica, erysipelas, skin diseases.....	Externally and 4 to 20 min. per os.
Iodine trichloride.....	Antiseptic.....	Externally in 1 per cent. of solution.
Iodoform bituminate.....	Antiseptic.....	Externally.
Iodol.....	Antiseptic.....	Externally.
Lanoline.....	Ointment base or vehicle for other medicaments.....	
Mercury phenate.....	Antisymphilitic.....	$\frac{1}{2}$ to $\frac{1}{2}$ gr. subcutaneously.
Mercury peptoglutine.....	Antisymphilitic.....	$\frac{1}{2}$ gr. subcutaneously.
Mercury salicylate.....	Antisymphilitic.....	$\frac{1}{2}$ to $\frac{1}{2}$ gr. subcutaneously.

Mercury succinimate...	Antisyphilitic.....	
Methacetin.....	Antipyretic.....	3 grs. per os. for children.
Methylal.....	Hypnotic and anæsthetic.....	15 to 30 grs. per os.
Methylene blue.....	Analgesic.....	8 to 15 grs. per os.
Methylene chloride.....	Narcotic anæsthetic.....	
Monobromacetanilide.....	Analgesic.....	1 to 8 grs. per os.
Mytol.....	Antiseptic in phthisis.....	5 min. per os.
Naphthalene.....	Antiseptic.....	2 to 8 grs. per os.
Naphtholic acid.....	Antiseptic and antiparasitic..	
Naphthol.....	Antiseptic.....	
Naphthol camphora-		
tum.....	Antiseptic antituberculotic...	Subcutaneously.
Orexin hydrochloride.....	Stomachic.....	$\frac{5}{8}$ grs. per os.
Paraldehyde.....	Hypnotic and sedative.....	15 to 45 min. per os.
Phenacetin.....	Antipyretic, antineuralgic....	8 to 20 grs. per os.
Phenylurethan.....	Antifebrile, antirheumatic....	6 to 8 grs. per os.
Piperazide hydrochlo-		
ride.....	General stimulant.....	Externally.
Pyocetanin.....	Antiseptic.....	
Pyridine.....	Antiseptic.....	1 to 1½ drs. by inhalation.
Pyrodin.....	(See Acetylphenylhydrazine.)	
Resorcin.....	Antiseptic, antifermentative..	
Rubidium ammonium		
bromide.....	Antiepileptic.....	½ to 1½ drs. per os.
Salipyrin.....	Antifebrile, antirheumatic....	15 grs. per os.
Salol.....	Antiseptic, antigonorrhoeic....	15 to 30 grs. per os.
Sodium theobromine		
salicylate.....	Diuretic.....	8 to 15 grs. per os.
Sodium anisate.....	Antipyretic, antirheumatic....	15 grs. per os.
Sodium dithiosalicy-		
late.....	Antipyretic, antirheumatic....	3 grs. per os.
Sodium paracresotate.....	Antipyretic, antirheumatic....	8 to 15 grs. per os.
Somnal.....	Hypnotic.....	30 min per os.
Soziodol.....	Antiseptic.....	Externally.
Sulphaminol.....	Antiseptic.....	Externally.
Sulphonal.....	Hypnotic.....	15 to 30 grs. per os.
Terpene hydrate.....	Against pulmonary affections	3 to 16 grs. per os.
Terpinol.....	Against pulmonary affections	2 min. per os.
Tetronal.....	Hypnotic.....	15 to 30 grs. per os.
Thallin sulphate.....	Antigonorrhoeic.....	Injection.
Thiol.....	Ichthyol substitute q.v.....	
Tribromphenol.....	Antiseptic.....	Externally.
Trional.....	Hypnotic.....	15 to 30 grs. per os.
Thioresorcin.....	Antiseptic.....	
Urethane.....	Hypnotic.....	15 to 40 grs. per os.

Cocaine and Antipyrin Combined as a Local Anæsthetic.

Dr. E. Stuver (*Hygiea*, No. 3, 1891,) praises a solution of five parts of cocaine and fifteen parts of antipyrin in one hundred parts of water as a very efficacious local anæsthetic for minor surgical operations. The action of this mixture he states to be more intense and longer lasting than that of cocaine alone. It has also been successfully employed in cases of obstinate vomiting.—*Cincinnati Lancet-Clinic*, August, 8th.

Compound Fracture of Skull, Loss of Brain Substance, Reproduction of Bone, and Recovery of Patient.

During the meeting of the Central Texas Medical Association, July 14th, 1891, Dr. J. C. J. King, of Waco, reported (*Courier-Record of Medicine*, July,) the case of a boy, age 4 years, who, on Nov. 9th, 1890, was pawed by a horse, causing a double compound fracture of the skull—one being about 1½ inches in extent on the frontal bone over the right eye, and the other on the right parietal bone and about 1½ inches from the median line. The bone in the latter case was driven into the brain, causing waste of the brain. Patient was put under chloroform, the scalp shaved, the depressed bone removed by means of the trephine and Hey's saw, the wound thoroughly cleansed with a carbolic solution, and closed and dressed antiseptically with a dry dressing. Next day temperature arose to 103°, dry dressing was removed, and the wet substituted. Fever continued about four weeks, but temperature was kept below 102° by use of antipyretics. On the fifth day motor paralysis of the left leg and arm, and of the right eyelid, occurred. Stitches were cut, wounds opened, and thoroughly cleansed and left open. Paralysis entirely disappeared in a few days; appetite improved, and patient slowly gained strength, although there was considerable suppuration. About the twenty-fifth day a secondary operation was done, removing dead bone from both wounds; scalp was brought as near together as possible and held by interrupted sutures. In a few days fever ceased, and the little fellow improved rapidly. After removal of the dead bone there was hernia of the posterior wound nearly as large as a walnut, which was pressed back and kept *in situ* by means of adhesive strips, the scalp having been shaven afresh. In six weeks he was able to sit up and play around in the room. The bone has re-formed in the front wound and in much the larger part of the posterior wound. The wounds have healed perfectly, though there is a small crust over the larger one. The little fellow is in perfect health, and mentally very bright.

The re-formation of bone in this case has been remarkable. The replacing of bone where there has been large loss from the skull has been tried and proved successful in some cases; though, since nature generally protects the brain in such cases by a dense fibrous tissue, the advantages gained by transplanting bone are hardly worth the trouble and delay necessary in such cases.

Seydel reports the case that lost a part of the parietal

bone about two inches long and nearly an inch wide, in which a superficial plate, with the periosteum, was chiseled from the inner sides of the tibia of the patient on the twelfth day, and transplanted to the wound, and was successful.

R. Jaksch reports the case of a soldier, age 22, having a comminuted fracture of the parietal bone, which, when removed, left a space one and one-fifth inches in diameter. On the eighth day the bone from the skull of a goose was prepared and planted on the granulating dura, and in less than two months the cure was complete.

Dr. J. H. Sears, of Waco, saw a case during the war, in which left parietal bone was fractured, and a teacupful of brain substance escaped. After usual treatment, raising bone, etc., patient made a good recovery in about three weeks. Five or six years ago patient was entirely well, and mind as good as ever.

Treatment of Upward and Backward Dislocation of Scapular End of Clavicle.

Dr. Wm. H. Doughty, of Augusta, Ga., again calls attention (*Jour. Amer. Med. Asso.*, August 8th,) to his method of reduction, etc., of upward and backward dislocation of the scapular end of the clavicle. His original description was given in the *Richmond and Louisville Medical Journal*, July, 1876. His method consists in drawing the arm forcibly downward and backward against the side of the chest—thus stretching to the utmost the fibres of the deltoid arising from the outer third of the clavicle, and antagonizing the trapezius whose vigorous action maintains the displacement; and further, rotating and fixing the scapula by drawing upon its attachments (muscular and otherwise) to the humerus. The arm is then secured firmly and immovably by wide strips of adhesive plaster, encircling the body and arm. In two of three cases so treated, satisfactory and permanent results followed; whereas, Hamilton, in his work on *Fractures and Dislocations*, says: "My notes furnish *only two* cases of perfect retention after complete dislocation at this point"—his notes covering forty-one cases in all. But Hamilton, Wyeth, Ashhurst, etc., still detail the old methods of reduction and retention. It should be remembered that the acromio-clavicular articulation is, perhaps, one of the weakest in the body, surgically speaking, and hence the necessity of restraining the two early use of the limb after reducing a luxation of this joint.

Gunshot Wound of the Liver through which Bile was Discharged—Recovery.

Dr. W. V. Cooke, of Corydon, Ky., reported the following case to the Kentucky State Medical Society, May, 1891:

January 5th, at 5:30 P. M., W. M., aged 37, weight 210 pounds, received four pistol-shot wounds, from a 38-calibre pistol. One shot entered beneath the left eye-ball, one entered the neck; one the right forearm, and one the right hypochondriac region, fracturing the eighth rib, passing through the right lobe of the liver, and lodging just beneath the skin of the back. When Dr. Cooke first saw patient he was bleeding profusely from the wound in the side, which was so superficial that, on consultation with Drs. Dixon, Brown and Jones, we were inclined to think that the ball had glanced around the eighth rib, beneath the muscles. A hypodermic injection was given, and antiseptic dressings were applied to the wounds. No probe was used; salts were administered. Rested well until midnight, when his abdomen became distended, and he developed general peritonitis. He vomited almost constantly for fifty-six hours. Then he grew gradually better for a week. Temperature, 99.5°; pulse, 90; respiration, 28; no tenderness over the region of the liver except at the wound of entrance, which was healed so well that Dr. C. took the dressing off.

Jan. 25th, patient complained of a fulness beneath the lower border of the ribs, extending downward from the liver. Dr. Cooke found a hard tumor, which felt like a fetal head.

Jan. 26th.—Aspirated; drew off from what proved to be the gall-bladder ten ounces of a black coffee-ground-looking material.

Jan. 27th.—Assisted by Dr. Johnson, he made an incision midway between wound of entrance and exit into the liver, letting out about one ounce of pus, most of which it was thought came from the muscles of the side.

Feb. 8th.—Gall-bladder became again distended, and pure bile began to discharge from the wound of entrance.

Feb. 10th.—Incision into gall-bladder according to the directions given for performing cholecystotomy. This incision let out about nine or ten ounces of the same black-looking material. A drainage-tube was introduced into the gall-bladder, but this opening ceased to discharge, and healed rapidly. The wound of entrance continued to discharge from three pints to two quarts of pure bile every

twenty-four hours until March 27th. During this time patient's bowels were constipated, and could only be moved by enema or large doses of salts. Tests for bile in the feces failed to show any. He had no appetite; was intensely jaundiced; circulation intermittent, and about 90 per minute; respiration, 26; he slept most of the time. When the discharge of bile from the side ceased for five or six hours, he would complain of a great fulness over the region of the liver, but as soon as it began to flow again he would be relieved. He diminished in weight very rapidly to about 100 pounds.

Feb. 22nd.—Bile ceased to flow from wound of entrance; abdomen again distended, and he suffered great pain from a feeling of fullness; temperature, 103.5°; pulse, 160; respiration, 36.

Feb. 26th.—Incision from wound of entrance parallel with lower border of eighth rib, five inches long, into the liver. This let out one-half ounce of pus and a great quantity of bile; it showed, too, that the eighth rib had been fractured. After this he began to improve rapidly. On March 25th he felt a peculiar fullness and some pain about the entrance of the ductus communis into the duodenum, and one could hear now and then a rumbling, gurgling sound, while the flow of bile from incision in the side greatly diminished until March 27th, when it discontinued to flow altogether. Appetite returned; bowels became regular; bile could be distinctly seen in the feces, and he continued to gain strength and weight until he was discharged April 17th.

The points of interest are—

1. The ductus communis was obstructed, and all the bile except that which circulated in the blood was discharged outside the body. It was considerably in excess of the quantity Dr. Cooke had been taught was discharged by the human subject in twenty-four hours.

2. It shows the obscurity of liver wounds, and that, however slight, they may become cases of gravity.

3. Good drainage by free incision is the best treatment when there is any formation of pus within the liver. Drainage-tubes were not borne well in this case, nor does he believe they can be used with any satisfaction in gunshot wounds of the liver.

This man had been drunk for four months previous to the shooting.

Practical Questions of Diagnosis and Treatment of Diseased Uterine Appendages Requiring Operation.

Mr. Rutherford Morrison, Assistant Surgeon Royal Infirmary, Newcastle-on-Tyne, says (*Med. Press*, July 29,) that in many cases of disease of the uterine appendages an elaborate differential diagnosis is difficult; in some, impossible; yet in nearly all a decision may be formed as to whether the case requires operation or not.

First, with regard to symptoms, three are characteristic of inflammatory disease of the appendages. (1.) A history of recurrent attacks of peritonitis; (2.) Hæmorrhage; and (3.) Pain—placed in their order of merit.

1. *Recurrent Attacks of Pelvic Peritonitis*.—Perimetritis of the older authors is due, in the majority of cases, to gross disease in the tubes. Pyo-, hæmato-, or hydro-salpinx, and cases presenting this symptom, as a general rule, require operation. If left alone, imperfect recovery may follow a long and painful convalescence, liable to be disturbed by relapses. Even when recovery seems assured, and several months of apparent cure are passed, the patient is still not safe. The cause of disease remains, and the effect, *pelvic peritonitis*, may re-appear at any time with alarming suddenness and fatal result. In a case of hydro-salpinx, operated on two years ago, the patient had, during an illness extending over four years, no less than eleven attacks of pelvic peritonitis, in three of which her life was despaired of. During the last attack, he removed two largely-dilated adherent tubes and both ovaries, and washed out and drained the pelvis. Her recovery was rapid and complete.

2. *Hæmorrhage from the Uterus*, with very few exceptions, occurs more or less in all of the inflammatory diseases of the uterine appendages, and appears to be closely related to the recurrent attacks of pelvic peritonitis, which may be so limited and mild in character as not to attract attention to the pelvic organs. The hæmorrhage is associated with more or less pain in the pelvis, is irregular in onset, uncertain in duration, and seldom profuse. By frequent recurrence and long continuance, in spite of suitable treatment, it produces serious deterioration of health; and taken along with physical evidence of diseased appendages, points to removal of these as the only satisfactory course. In certain rare cases, hæmorrhage is the only symptom of *ovarian disease*. Both of his patients were between twenty and thirty years of age—one married, one single. Profuse painless hæmorrhage, causing profound anæmia, occurred in both. Both were

temporarily relieved by curetting and the application of carbolic acid and iodine to the interior of the uterus; but in both hæmorrhage soon recurred. The ovaries in each case were more than double their natural size, freely movable, and not specially tender. The married woman, whose ovaries he removed, made a most satisfactory recovery. The single woman was not operated on, and died of hæmorrhage about six months after he saw her. The ovaries removed were large and studded with cysts, a condition he regarded as resulting from chronic ovaritis. Such cases can only be treated by removal of the diseased appendages.

An apparently healthy, though probably inflamed, *ovary*, *displaced* into Douglas' pouch, is sometimes associated with irregular hæmorrhage. This, together with incapacitating pain, certainly caused by the displaced ovary, and not remediable by milder measures, makes removal of the offending appendages a justifiable and advisable operation.

3. *Pain*.—The most urgent symptom from the patient's point of view is the most misleading from the surgeon's. The most prolonged and painful complaints are not always attended by physical evidence of organic disease. What is true of the whole body in this respect is true of the uterine appendages also.

This fact is not sufficiently recognized. It is a safe rule to regard the continually pained, incapacitated invalid with suspicion. Operations should not be performed on such cases, unless there is the most satisfactory physical evidence of gross and active pelvic disease. They are the patients who are no better, but worse, for the operation, and a disgrace to surgery. That they are frequently cured after operation cannot be denied; but this result cannot be relied on, and *it is not brought about by the skilled treatment adopted.*

Between three and four years ago, a young lady, 19 years of age, had been a bright, healthy, cheerful girl till four years before, when menstruation began. Since then she had been dull, ailing, and melancholic. The menstrual periods were always attended with suffering which latterly had been very severe. No sooner had one period passed than the next was anticipated with something approaching to despair. The pain was so great that both the patient and her mother were afraid of her reason giving way, and came to ask him to remove her ovaries, as they had tried everything else without avail. Careful examination failed to show any sign of disease or mal-development, and he refused to operate. Shortly afterwards, the young lady attempted suicide by drown-

ing. Eighteen months later, he saw her again; she was well and happy; *since her immersion she had never had a pain.*

The physical signs indicating that a case requires operation are—

1. The ordinary signs of pelvic peritonitis with exudation, possibly in sufficient quantity to obscure all other landmarks. The history is usually one of preceding gonorrhœa, abortion, or confinement; the symptoms those described; and cause, diseased tubes.

2. Dilated and distended tubes, usually to be felt behind the uterus, and recognized by the rounded shape and elastic feel. The history varies according to cause of disease and contents of tubes. Gonorrhœa is the most frequent cause, and the contents of the tubes usually purulent.

Extra-uterine pregnancy may be the cause, and blood is then found in the tubes. *The tumor behind the uterus in these cases is frequently mistaken for retroflexion of that organ,* and the symptoms, those described, attributed to that displacement.

3. Ovarian enlargement, which may be due to abscess or chronic ovaritis. Ovarian tumors must be removed as soon as discovered.

4. A displaced ovary, when causing painful defecation, pain during sexual intercourse, irregular hæmorrhages, and pain on palpation, should be removed, if ordinary methods fail to relieve the symptoms.

5. Some cases of acquired dysmenorrhœa, frequently due to chronic salpingitis, can only be cured by removal of the appendages. It may be impossible to feel the ovaries and tubes as they are buried in old adhesions. The presence of adhesions is an important aid in the diagnosis.

6. Some cases where irregular hæmorrhage, illness, and pain result from long standing inflammatory disease of the uterine appendages, can only be cured by their removal. The history, together with signs of matting by adhesion of the pelvic organs, may be the only guides, for the ovaries and tubes, being buried in adhesions, cannot be palpated.

7. *Every case of acute general peritonitis is due to some gross lesion,* mostly requiring operative treatment; and in women, the possibility of rupture of diseased appendages, must not be forgotten.

In a few words the conclusion is that cases of ovarian and tubal disease, requiring the operation of removal, are those

in which there are definite signs of disease in the pelvis, causing serious symptoms. It will make his propositions clear to briefly mention what cases should not be operated upon by this method.

1. Cases of dysmenorrhœa unless the form acquired the condition previously alluded to.

2. Cases of adherent and displaced ovaries and tubes unless the serious symptoms previously mentioned are present. Pain in this class is a common symptom. The patients are neurotics, and in bad health. *Neither the pain or bad health are due to the adherent tubes or ovaries.* Adhesions anywhere else in the body are not regarded as a cause of pain and incapacity. Why make this an exception?

3. His present feeling is against operation in the most pronounced neuroses, as hystero-epilepsy, insanity, etc.

The discussion is on the surgical treatment of diseased appendages. Removal of the diseased appendages is the only course, if the diagnosis is correct.

Patients have been cured after a variety of other operations, such as separation of adhesions, catheterization of tubes, etc.; but similar cases have been cured by scratching the abdominal wall under an anæsthetic, and the insertion of sutures, with all the other formidable preparations and accessories of a serious operation. The choice in the two cases depends on whether it is thought better that the surgeon should be deceived or should deceive.

As to the results of removing the appendages, nothing could be more satisfactory. The patient's immediate recovery is rapid; the mortality, for a major operation, small; and every one interested is satisfied with her ultimate condition. He has had sufficient opportunity for forming a judgment on the matter, and is convinced—

1. That a woman is in no evident way altered by removal of her uterine appendages in these cases, except for the better.

2. That her womanly instincts and feelings are not abolished by the operation.

If suitable cases only are submitted to operation, prolonged and tiresome convalescence and doubtful results will soon cease to be heard of.

His endeavor has been, so far as he could, to indicate—

- (1.) How a diagnosis of cases suitable for operation is to be made; (2.) What cases should not be operated upon; (3.) What operation is to be selected; (4.) What result is to be expected from operation.

Myiasis Narium—Campho-Phenique—Recovery.

Dr. W. H. Grayson, of Venice, Ill., reports (*St. Louis Med. and Surg. Jour.*, August, 1891,) the case of a powerfully built young fisherman who had for some time a chronic catarrh which had recently developed into ozæna, causing a terribly painful affection of the face and nose. Two nights after the ozæna began, he felt severe itching across the bridge of his nose and in his nose, which brought on severe fits of sneezing. Pain rapidly became intense, and swelling and superficial inflammation of the nose and upper part of his face set in—resembling erysipelas. Dr. Grayson painted this surface with campho-phenique. While doing this, a small, white, screw-like maggot dropped out of the nostril on the floor; and in a moment or so, two more dropped out, showing that it was a case of the dreaded “screw-worm disease” or *myiasis narium*. A closer examination of the cavities showed the entire hard palate was so rotten and necrosed by the ravages of the larvæ that the Doctor’s finger passed through it as though cheese or putty—a large number of the larvæ escaping at the same time from the nostrils, and the opening through the palate was thus made.

Using a bent nozzle syringe, he flushed the entire nasal cavity with campho-phenique, which brought away a vast number of the larvæ, with some sloughed tissue and pieces of necrosed bone. After the general exodus thus caused, larvæ continued to come away, two or three at a time, for about forty-eight hours, where the reflex symptoms abated.

Under the continued use of campho-phenique, the patient made a good recovery so far as the nature of the case would admit. Of course a plastic operation would be required to replace the destroyed bony and other tissues of the hard palate, etc.

The larvæ showed a wonderful tenacity of life in media usually promptly fatal to other forms of life. In surgical solutions of carbolic acid, they lived a considerable time, and they did not die readily when immersed in pure chloroform. But campho-phenique was almost instantly fatal to them.

As to the methods hitherto adopted to get rid of these screw-worms and their larvæ, Dr. Powell used chloroform emulsified with milk; but this treatment is slow—not to say dangerous. Kuchenmeister recommends extraction of the larvæ with forceps, but in a case like the one reported, this would be a formidable method. Only when the affection is superficial, as in *myiasis vulnerum*, is this procedure possi-

ble. Summa recommends a solution of corrosive sublimate, after taking the precaution to administer albumen to protect the stomach. Wobynez recommends iodoform. Van Beneden recommends citric acid. But campho-phenique is a sure, safe and rapid remedy, and entirely free from the objections belonging to the other agents. It can be used freely, without previous preparation of the patient, and without injury to healthy tissues, and it causes, even when used *ad libitum*, no evil sequelæ. Besides its lethal effects upon the parasites, it exerts a local anæsthetic effect—very grateful to the patient.

There are a number of dipterous flies whose larvæ cause myiasis in some form. Most of them are indigenous to the tropics, and are rarely found outside of them. But the fly that is found in the Doctor's section seems to be none other than the common "blue-fly" or "blow-fly." [But the editor of the *Journal*, after comparing the fly in the case just reported with the *lucilia hominis*, thinks the resemblance is much stronger to the latter.]

It would, no doubt, be difficult to convince one afflicted with myiasis that flesh flies could possibly subserve human interests. Yet Prof. Riley reports that they are deadly enemies of the locust or grasshopper which in myriads are now devastating portions of our "far western" country. The "flies" paste their eggs under the wings of the locust, and the larvæ, as soon as hatched, bore into the abdomen of their host.

Essence of Cinnamon Spray for Malarial Diseases.

The London Correspondent of the *American Lancet*, August, 1891, says that in a hospital in Turkestan, excellent results have been obtained in the treatment of all forms of malaria by sprays of essence of cinnamon. Dr. Capsus says that even cases which have resisted the action of quinine and arsenic improved in a few days under his treatment. The spraying is performed several times daily, and is much more efficacious than spraying with essence of eucalyptus, which was previously employed. Essence of eucalyptus, with camphor, appears to be efficacious in some kinds of spasmodic asthma; but, as an antiseptic, it is not certain that it equals essence of cinnamon. It is known that cinnamic acid is more destructive to bacteria than salicylic acid; and it is probable that it will be found that essence of cinnamon is one of the most powerful antiseptics ever discovered.

Measures to Favor the Expulsion of Hepatic Calculi.

Dr. H. Illowy, in a translation for the *Cincinnati Medical News*, August, 1891, says that when a calculus is arrested in one of the biliary conduits, it has already run a part of its course, and we should seek to favor the dilatation of the canal. If the calculus is not large, and if the symptoms are not very grave, we may accomplish our purpose with the tincture of belladonna and placing the patient in a warm bath; during the paroxysm have him inhale the vapor of a mixture, as follows:

R.—Alcohol ʒj
 Chloroform..... ʒij
 Ether, sulph..... ʒiiij—M.

Moreover, administer an emetic or a purgative, so that the efforts of vomiting, or of stool, may hasten expulsion of the calculus. Although opiates are contra-indicated in the majority of hepatic diseases, we must make an exception in their favor in case of arrested calculi; where pain is extremely severe, a hypodermic injection should be given in the epigastric region; however, never neglect to administer belladonna. When it is associated with opium, give the dose every two hours until the physiological action of both drugs is obtained. The anodyne treatment can be employed likewise in the form of liniment, plaster, or suppository. Also make gentle friction with the left hand, from right to left—not from left to right—and light pressure from above downward, directing the biliary bladder toward the umbilicus. During this time allow the patient to drink warm alkaline water; for example, teaspoonful of bicarbonate of soda, in a glass of pure water. We cannot give too much of this warm alkaline drink, because it soothes better than anything else the irritability of the stomach; it facilitates emesis; and it influences favorably the secretion of bile, an abundant flow of which favors the passage of the calculus. We should not neglect an active purge of mercury with an alkali. Harley advises—

R.—Hydrarg. cum creta.....grs. vij
 Pulv. rhei.....grs. iiiss
 Magnesia.....grs. xxviiij.—M.

Harley has devised a procedure to provoke expulsion of a calculus not larger than a hazel-nut—digital manipulations through the abdominal parietes. He cites a grave case, in which death was thought imminent, wherein he provoked expulsion of the calculus into the intestine after

manipulating the distended gall bladder for ten minutes; in another patient, subjected to the same treatment for more than two years, he obtained expulsion of more than 200 calculi. He proceeds thus: When the gall bladder is distended, its fundus lies directly against the abdominal parietes; it is then very easy to make pressure upon the fundus with the tips of the fingers upon the integument, and, as in the case of the rubber bulb, the pressure will suffice to drive the contents of the organ into the biliary canals, and thence into the intestine. These massage manipulations should be made every day for ten to twelve minutes, and this under certain circumstances for months.—*Jour. Med. et de Prac. Chirurg.*

Entire Excision of the Tongue.

Walter Whitehead (according to *Med. and Surg. Rep.*, August 8th,) reports (*Brit. Med. Jour.*,) 104 cases of complete removal of the tongue for carcinoma, with a mortality from the operation of 19.21 per cent. Ages of patients ran from 56 to 70 years. No selection of cases was made for report. He describes the technique as follows:

1. The patient should be completely under the influence of the anæsthetic during the first stage of the operation, but afterwards only partial insensibility should be maintained.

2. The mouth should be securely gagged and kept fully open throughout the operation.

3. The head should be supported in such a position that, while the best light is secured, the blood tends to gravitate out of the mouth instead of backward into the pharynx.

4. A firm ligature should be pressed through the tip of the tongue for the purpose of traction.

5. The first step in the operation consists in dividing the reflection of the mucous membrane between the tongue and jaw and anterior pillars of the fauces.

6. Rapid separation of the anterior portion of the tongue from the floor of the mouth.

7. Securing, if possible, the lingual arteries, with Spencer Wells' forceps, prior to division.

8. Passing the ligature through the glosso-epiglottidean fold, before finally separating the tongue.

9. The application of a mercurial solution to the floor of the mouth, followed by painting the surface with an "iodoform styptic varnish."

He recommends early operation, chloroform for an anæsthetic, and the mouth to be kept very widely open. Have

the patient sit up from the first, and to walk about should the weather be fine. Scissors are used in preference to other instruments.

The ultimate results have always been unsatisfactory, but the author believes that the operation frequently prolongs life, or, failing in this, renders the patient's last days more comfortable. One of the patients survived the operation fourteen years, although he was sixty-two when operated upon.

Bromide of Ethyl for Epilepsy.

Dr. Tal. Donath claims to have discovered a remedy against epilepsy, which is far superior to any other preparation. Bromide of ethyl ($C_2H_4Br_2$) is the remedy spoken of. It being insoluble in water, he administers it in emulsion such as:

R_x.—Æthyleni brom. 3j. gr. xv.
 Emuls. oleos..... 3iij, 5j.
 Ol. menth. pipgtt. ij.

M.—S. For adults: take 30 drops in a half glass full of sugar water two to three times daily.

On the third day he increases the dose to 40 drops; on the sixth day to 50 drops; on the seventh day to 70 drops.

Donath has not administered any larger doses than 70 drops, which is equivalent to $4\frac{1}{2}$ grs. of bromide of ethyl. In children of eight to ten years, he begins with 10 to 20 drops. By gradually increasing the dose he prevents any ill effects which the remedy may have on the stomach. Should the stomach be irritated, he decreases the dose and adds gr. iss—gr. iij. to above prescription.

Another way of administering this preparation is:

R_x.—Æthyleni brom.
 Spt. vini rectificati.....āā 3j, gr. xv.
 Ol. menth. pip.....gtt. ij.

M.—S. Five to fifteen drops in a little milk two to three times daily.

Or R_x.—Æthyleni brom.....gtt. iij.
 Ol. amygdal. dulc.....gtt. vj.

M.—Fiat caps. gelat. No. 1.

S.—Two to four capsules two to three times daily.

(*Pester Med. Chirurg. Presse.*, as quoted in *Times and Register*, August 8th.)

Selling Liquor to Minors.

The right to sell liquor to minors came up in Texas not long since under rather peculiar circumstances. The statute of that State prohibits the sale to a minor without a written order from his parents, and makes the offense punishable by fine and imprisonment. A boy, however, secured from a liquor dealer some spirits on the statement that it was needed for the immediate use of his mother, who was very sick, and that his father had sent him in a hurry for it without giving him a written order. The boy lied to the liquor-dealer in the matter, and wanted the liquor for himself. An indictment was found against the liquor seller, and on trial, he was convicted. An appeal was then taken, and the Supreme Court has reversed the conviction on the ground, that though the statute had been violated in its letter, it had not in its spirit, as the seller supposed he was making the sale to the parents and not to the boy. The minor deceived the liquor-seller by his falsehoods, and the latter had no reason to think he was being imposed upon. The court held that the intention to commit a crime is always necessary to make a conviction valid, and there was no intention whatever in this case to violate the statute.

The court cited in support of its position the ancient law, that whosoever drew blood in the streets should be punished, but said that this did not apply to the surgeon who opened the vein of a person who fell down in the streets in a fit. In that case the surgeon violated the letter, but not the spirit of the statute.

Death from Ether.

The *Occidental Medical Times*, August, 1891, reports probably the first case of this accident in California. A woman, aged 41, under the care of Dr. Charlotte B. Brown, in the Hospital for Women and Children, San Francisco, was being given ether (June 1st) for the removal of a uterine fibroid. The patient was anæmic, but her heart, lungs, and kidneys were in good condition. A teaspoonful of aromatic spirits of ammonia and a teaspoonful of whiskey were given fifteen minutes before the operation. Ether was administered with a cone made of a towel, but the quantity used is not mentioned. Twenty-five minutes after insensibility had supervened, the heart's action became very feeble. All sorts of restoratives were used, but without avail. Not more than five minutes elapsed from the first sign of heart failure until death supervened.

Students Mistaken for Grave Robbers.

The Hopkins University Tramp Club was recently in danger of being mobbed for grave diggers. The Club had secured a log-cabin near a grave-yard for a rendezvous, and had kept the building well locked and bolted, because the visits to it were only occasional. It came to be the belief in the neighborhood that the Club was a regular organized body of grave robbers from a Baltimore Medical College, and armed men with shot-guns were watching every night for the expected raid. Finally the farmers decided to clean out the cabin and drive the supposed ghouls away. A member of the Club, however, discovered their intentions, and satisfactorily explained matters.

Mental Suffering and Telegrams.

It is a vexed question in the courts whether damages can be recovered for neglect to deliver a telegram, where there is no pecuniary loss, but only mental suffering involved.

In a recent Indiana case the telegram was as follows: "My wife is very ill; not expected to live," and was not delivered for twenty days.

Under these circumstances the court held that there must be compensation for the mental anguish, which could not fail to result from the failure to deliver the telegram.

The Judge said he had no sympathy with the rule which allowed a recovery only in those cases where there was a pecuniary loss.

Prescription for Pruritus Vulvæ.

Tarnier (*Rev. Internationale de Bibl. Méd.*, No. 2, 1891,) uses the following:

R. Sublim. corrosiv.....	2.0 (grs. xxx).
Alcohol.....	10.0 (fl. ʒijss).
Aq. rosæ.....	40.0 (fl. ʒjss).
Aq. destill.....	450.0 (fl. ʒxiii).

Sig.—Apply this lotion morning and evening.

It is of especial service in pruritus vulvæ of pregnant women. Its application may at first produce, to a certain degree, a sensation of burning, which will necessitate the application of cold compresses.—*Cincinnati Lancet-Clinic*, August 8th.

Antikamnia.—Dr. Caleb Lyon, of Rossville, Staten Island, says he would rather abandon morphine than antikamnia, which he regards also as an unequaled febrifuge.

For Asthmatic Attacks.

Dr. W. T. Plant, of Syracuse, N. Y., recommends (*Pract. & News*, according to *Amer. Med. Jour.*, August, 1891)—

R.—Stramonium leaves.

Green tea dust.....āā ʒiv.

Lobelia.....ʒiss.

M.—Wet with saturated solution of potassium nitrate. Dry thoroughly. Keep in a clean can or a well-stoppered bottle.

S.—During asthmatic attacks, inhale smoke of about a teaspoonful of the combination.

Book Notices.

Practical Intestinal Surgery. By FRED. B. ROBINSON, B. S., M. D. Professor of Anatomy and Surgery, Toledo Medical College. Vols. I (172 pages), and II (206 pages.) 12mo. Paper. Geo. S. Davis, Detroit, Mich. Price, 25 cents a Volume. (From Publisher.)

These are two successive monthly volumes of the now well known and appreciated "Physician's Leisure Library." They treat of a branch of surgery in which most rapid advances have been made in the past three or four years. Hence what is to be found in these volumes need not be looked for in the standard surgical books. Full descriptions are given of each of the many operations demanded at times upon the intestines, with details as to the modes of preparation of plates for "anastomosis" operations, etc. The author is well known throughout the surgical world because of his several original suggestions, inventions, and plans of operations. These volumes alone, are worth the price of an annual subscription to the library—\$2.50.

Report on Cholera in Europe and India. By EDWARD O. SHAKESPEARE, of Philadelphia, A. M., M. D., Ph. D., United States Commissioner. Washington. Government Printing Office. 1891. Cloth. 4to. Pp. 945.

President Cleveland, under act of Congress, appointed Dr. Shakespeare, in 1885, a Commissioner to visit "Spain and such other countries of Europe where cholera exists,

and make investigation of the causes, progress, and proper prevention, and cure of said disease." With *carte blanche*, the author visited several countries, made many observations, and his published report is wonderful as to the amount of details of experiment and observation; but it does not do what we as people and physicians hoped would be accomplished, namely, show a sure preventive, and suggest a satisfactory cure of the disease when it has once taken hold of the system. And yet the work is invaluable for students who have to deal with the mass of facts presented. Indeed nothing but a Nation could have undertaken such a work. We regret that the enormous amount of work done by the author caused his health to give way; and that it required a year to recover his strength sufficiently after his return to America before he could undertake the compilation of his papers. His work, however, is well done.

Wood's Medical and Surgical Monographs, Vol. 11. Nos. 1 (July) and 2 (August, 1891.) Published Monthly. \$10 a year \$1 Single copy. Wm. Wood & Co., Publishers. New York. Paper cover.

No. 1 of this volume contains "monographs" by Sir Morrell Mackenzie, M. D., on Hay Fever and Paroxysmal Sneezing; Dr. Fudor Krause, on Tuberculosis of the Bones and Joints; and F. H. Bosworth, on A Study of Malignant Disease of the upper Air Tract. No. 2 has papers on Modern Abdominal Surgery, by Sir T. Spencer Wells, Bart.; on Subjective Noises in the Head and Ears—their Etiology, Diagnosis, and Treatment, by Dr. H. MacNaughton Jones; Notes on Surgery for Nurses, by Dr. Joseph Bell; Surgical Treatment of Typhlitis, by Frederick Treves, F. R. C. S.

Lectures on Tumors from a Clinical Standpoint. By JOHN B. HAMILTON, M. D., LL. D. Professor of Principles of Surgery, and Clinical Surgery, Rush Medical College. Formerly Supervising Surgeon-General U. S. Marine Hospital Service, etc. 1891. George S. Davis, Detroit, Mich. Price 25 cents.

This is one of the "Physician's Leisure Library"—\$2.50 a year. The author does not bring out anything materially new; but he does use old facts in such a form as to furnish Americans with practically the only one book on tumors published in the English language which students can adopt for their diagnostic study of tumors. To the Professor, who

heretofore has been compelled to examine books in foreign languages in order to make his lectures fully descriptive, this work is of special importance. For surgical practitioners, this book will prove invaluable.

Post-Graduate Course of Lectures. Medical Faculty University of Toronto. Delivered December 17, 18, 19, 1890. (Reprinted from *The Canadian Practitioner*.) Pp. 78.

These Lectures were delivered by Prof. J. Wm. White, M. D., of Philadelphia; Dr. Victor Vaughan, of Michigan; Dr. J. E. Graham, of Toronto; Dr. Robert Abbé, of New York; Alexander McPhedran, M. B., of Toronto; Prof. Wm. Oldright, M. D., of Toronto; A. Primrose, M. B., etc., of Toronto; Dr. B. E. McKenzie, of Toronto; and Dr. Geo. A. Peters, of Toronto. The principal subjects were anti-septic surgery; typhoid fever; spinal surgery; surgical tuberculosis, etc. These "Lectures" will stand for a long time as authorities.

Stories of a Country Doctor. By WILLIS P. KING, M. D., Ex-President of Missouri State Medical Association, etc. With Illustrations by T. A. Fitzgerald. Philadelphia: Hummel & Parmele. 1891. Cloth. 8vo. Pp. 397. \$1. (From Publishers.)

This is the same book noticed in our June number, 1890, but as issued by the present Publishers, with its numerous pages of advertisements, the price is reduced to \$1. As it contains so much of actual experience and observation—amusing and, at times, pathetic—and as it affords light reading for the doctor broken down by his weary days of labor, we advise our readers to get the book for recreation hours. "A little nonsense, now and then, is relished by the best of men."

Des Glycosuries non Diabetiques. Par G. HALSTEAD BOYLAND, Docteur en médecine de la Faculté de Paris, etc. Paris. Imprimerie de la Faculté de Médecine. Henri Jouve, 15 Rue Racine, 15. 1891. Paper. 8vo. Pp. 84.

This thesis on non-diabetic glycosuria will be recognized in America as being by a former Professor in the Medical College of Baltimore. The thesis itself shows a laborious research of the literature on the subject, as well as careful study of some clinical observations of his own; and demonstrates that while glycosuria is not a physiological con-

dition, still there is a non-diabetic condition causing sugar in the urine due to some purely functional trouble in the organism, and hence its disappearance from the urine is common. The treatment of this functional glycosuria consists in the limitation of the amount of saccharine alimentation and the adoption of certain hygienic measures.

The Mother's Hand-Book. A Practical Treatise on the Management of Children in Health and Disease. With an Appendix Containing Articles on Diseases and Accidents that may Suddenly Happen to Grown Persons. By LEVIN J. WOOLLEN, M. D. Richmond, Va.: Everett Waddey Co. 1891. 8vo. Pp. 119. Sheep, \$2.75; Cloth, \$2.25. (From Publishers.)

Such a work as this one is especially useful in families remote from a doctor. It abounds in useful information, which can be adopted, for the most part, without the risk of adverse criticism. The work is not intended as advice to the mother to administer medicines in other than the "simple cases" of sickness, or when emergencies may require immediate treatment before the doctor arrives. If this book is properly read, it will do good and no harm. We would be glad to know that our patients had the book, and inform themselves as to its teachings. The volume is neatly issued, and in durable binding, and is unusually free of typographical errors—a matter of very commendable importance.

Dioiviburnia and Neurosine.

The doctors who have tested the samples of these preparations of the Dios Chemical Company, of St. Louis, recently left in their offices by Dr. Fuller, have found them to fully equal their respective claims. They represent often needed combinations. Look up the samples you pushed aside, and try them according to the indications named in the advertisement in this journal.

Ergotole,

Prepared by Messrs. Sharp & Dohme, is nearly three times as strong as fluid extract of ergot, and represents all the active ingredients of ergot. It is non-irritant, and not nauseous to taste or smell. Used hypodermatically, it is said not to produce abscesses, etc. Dr. Wm. C. Kломans, of Baltimore, records his favorable experience with it. (*N. Y. Med. Jour.*, June 6th, 1891.)

Editorial.

Medical Society of Virginia.

The Twenty-second Annual Session of this Society will convene at 8 P. M., Tuesday, October 6th, 1891, in the Hall of the Young Men's Christian Association, in Lynchburg, Va. It was upon resolutions adopted by the Lynchburg Medical Association in 1870 that the first steps were taken to organize the State Society, and the doctors of that city have ever since manifested the liveliest interest in all that has tended to promote its development to its present position of usefulness. Hence it is that the coming session has something of a special local interest; and the Local Committee of Arrangements, under the general Chairmanship of Dr. C. E. Busey, assisted by well-selected sub-committees, is actively engaged in perfecting all arrangements necessary for a most pleasant and profitable meeting. The Society is especially indebted to the Sub-Committee on Halls, Hotels, and Railroads, of which Dr. J. W. Dillard is chairman, for securing the reduction of rates, etc., named in the usual Announcement Circular of the Session, which is just now being distributed. Dr. Frank Camm will be in charge of the Committee on Exhibitions of Pharmaceutical Preparations, Surgical Appliances, etc.

A number of distinguished gentlemen from other States have promised attendance and contributions to the scientific proceedings. Among them are Drs. J. H. Claiborne, Jr., Landon Carter Gray, of New York city; T. D. Crothers, of Hartford, Conn.; B. A. Watson, of Jersey City; H. P. C. Wilson, of Baltimore; Joseph Price, of Philadelphia; I. S. Stone, of Washington, D. C.; James E. Reeves, of Chattanooga, Tenn.; A. W. Calhoun, of Atlanta, Ga.; A. M. Phelps, Egbert H. Grandin, New York; and T. A. Ashby, of Baltimore, etc.

Among resident Virginians who will present papers, besides the President's Address, by Dr. W. W. Parker, of Richmond, Va., the Address to the Public and Profession, by Dr. C. M. Blackford, of Lynchburg, and the papers by the regular Reporters of Advances in each of the eight grand divisions of medical science, Dr. P. B. Green, of Wytheville, will lead in the discussion of the regularly-selected subject, *Acute and Chronic Dysentery*. Dr. W. J. Crittenden, of Unionville, will

present a paper on the same subject. Honorary Fellow, Dr. Bedford Brown, of Alexandria, will read a paper on "Dysentery Viewed as a Septic Disease, and Treated by Antiseptics." Dr. Wm. H. Baker, of Lynchburg, will have a paper on "Ophthalmology in Ancient Egypt." Dr. Fred. Horner, of Marshall, will discuss "The Drink Problem from a Medical Point of View." Dr. J. T. Graham, of Wytheville, will read a paper on "Puerperal Eclampsia—its Etiology and Treatment"—this paper being based on a study of some hundred or more reports in the practice of Virginia physicians. Dr. J. N. Upshur, of Richmond, will read a paper on "Hæmorrhoids and their Treatment." Dr. Charles M. Shileds will have a paper on the "Treatment of Goitre by Electrolysis." Dr. Wm. C. Dabney, of University of Virginia, will present one on "Symptomatology and Treatment of Chronic Forms of Nephritis." Thus it will be seen, from this partial list of authors, that the scientific interest of the Session will be of more than ordinary value.

A great deal of interest will attach to the reading of the two competing essays for the prize of \$100, offered by Honorary Fellow, Hunter McGuire—the subject being *Pyelo-Nephritis*—provided, of course, the committee appointed to examine the essays to be presented determine that one or two are worthy of a prize. The two best essays deemed by the Committee worthy of the prize are to be read before the Society in open session, and a ballot vote will decide which of the two is deemed best by the Society. Of course, the authors are not to allow their names to be known until after the ballot is taken.

The Recording Secretary of the Society reports that there will be a large addition to the Fellowship of the Society—judging from the goodly number of applications already in hand.

Intoxicated Doctors Disqualified in Georgia.

Any physician offering for practice in Georgia (according to a recent legislative enactment,) on being proven to drink to excess, is hereafter to be deemed disqualified to practice his profession in that State.

McArthur's Hypophosphites,

Advertised on the white card-board facing advertising page 51, is an essential help in the treatment of "wasting diseases."

Subjects of Reporters for the Next Meeting of the Medical Association of the State of Alabama.

In the way of pre-arrangement for the scientific interest, and consequent success of the Session of the Medical Association of the State of Alabama, to be held in Montgomery during April, 1892, the distinguished as well as industrious President, Dr. B. J. Baldwin, of Montgomery, has set an example that we wish all other Presidents of Societies would follow. Immediately after his election last April, he went to work to see how valuable he can make the next session; and the following list of selected Reporters, with the titles of the subjects of the papers they will present, shows how well he has succeeded:

Dr. W. C. Bailey, of New York city, "Bacteriology in General Medicine—its Usefulness and Scope."

Dr. M. C. Baldridge, of Huntsville, Ala., "Puerperal Septicæmia."

Dr. J. H. Blue, of Montgomery, Ala., "The Pathological Significance of Albuminuria."

Dr. George L. Brown, of Birmingham, Ala., "Gunshot Wounds of the Abdomen."

Dr. Peter Bryce, of Tuscaloosa, Ala., "Progressive General Paresis."

Dr. W. P. Copeland, of Eufaula, Ala., "Endemic Mental Disease."

Dr. J. McFadden Gaston, of Atlanta, Ga., "Wounds and Diseases involving both Abdomen and Thorax."

Dr. H. M. Hunter, of Union Springs, Ala., "Uterine Hæmorrhage after Miscarriage."

Dr. W. H. Johnston, of Birmingham, Ala., "Beneficial Effects of Dilating the Sphincter Ani in Rectal Diseases."

Dr. Golsby King, of Selma, Ala., "The Treatment of Penetrating Wounds of the Abdomen."

Dr. Middleton Michel, of Charleston, S. C., "Trephining for the Cure of Epilepsy."

Dr. J. H. McDuffie, of Anniston, Ala., "Functional and Organic Diseases of the Female Bladder."

Dr. John E. Purdon, of Cullman, Ala., "The Physical Import of Variable Achromatopsia (an original research)."

Dr. B. W. Toole, of Talladega, Ala., "The Physician's Moral Status to Patron and People."

Dr. John A. Wyeth, of New York city. (Subject to be announced.)

Dr. James A. Wilkinson, of Thomaston, Ala., "Dysentery in Southern Alabama."

Monitor—Dr. E. H. Sholl, of Birmingham,

The Medical Examining Board of Virginia

Will meet in Lynchburg, Va., in the Hall of the Young Men's Christian Association, Tuesday, October 6, 1891, at 8 P. M., for the routine business of the Board, such as arranging questions for examination, etc. The examination of applicants will be begun promptly at 9 A. M., Wednesday, October 7th, and will continue for two days. Applicants must be on hand from the beginning of the first examination. The first examination will be on Chemistry; the questions will be put on the blackboard at 9 A. M., and are taken down at 12 (mid-day), when the questions for the next subject of examination will be immediately put up, and taken down at 3 P. M., etc. Questions once taken down are not put up again. Each candidate is expected to sign a paper containing a statement to the effect that he has neither received nor given any information on any of the subjects under examination during the time of the examination.

Any party wishing to be examined should come prepared with the examination fee of *five dollars* required by law, and report immediately to the Secretary of the Board (Dr. Paulus A. Irving, of Farmville, Va.), who will be in the hall *an hour* before the appointed time, to issue in due form the permits for examination.

Candidates for examination are not allowed to leave the hall after once entering it, until they have handed in their papers relating to the subject then on the blackboard. Furthermore, they are not allowed, during the progress of the examination, to communicate with each other verbally or by notes or signs. Visitors will not be allowed in the hall during the examinations except by official invitation, and under no circumstances will they be permitted to communicate with or interrupt the candidates during the time of the examination.

Candidates, in turning in their papers to the respective chairmen of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers as returned by the candidates examined and marked by the respective Section Examiners. Each candidate will have a desk or table assigned him by number, and he is expected to occupy only that desk during the examination.

For further information, address the Secretary, Dr. Paulus A. Irving, Farmville, Va.

Tri-State Medical Association of Alabama, Georgia, and Tennessee

Will hold its Third Annual Session in Chattanooga, Tenn., October 27th, 28th, and 29th. The preliminary circular announces a paper by the President, Dr. Robert Battey, of Rome, Ga., on Ovariectomy—its Use and Abuse. Among other papers announced are: Physiological Functions of the Nose, by Dr. A. B. Thrasher, of Cincinnati; Typhoid Fever, Complicated with Pregnancy, by Dr. Andrew Boyd, of Scottsboro, Ala.; Oxygen Gas and Creosoted Oil in the Treatment of Phthisis, with Report of a Case, by Dr. J. F. Lynch, of Sanford, Fla.; An Entirely New and Successful Treatment of Gonorrhœa and its Sequences, by Dr. G. W. Broome, of St. Louis, Mo.; Evolution from a Scientific Standpoint, by Dr. J. P. Stewart, of Attalla, Ala. The following are by Chattanooga doctors: Physiology and Chemistry of Therapeutics, by Dr. G. W. Drake; Angina Pectoris, by Dr. W. C. Townes; Case of Neuromimetic Trouble, by Dr. E. E. Kerr; Case of Epilepsy Cured by Operations on the Eye, by Drs. H. Crumley and Frank Trester Smith.

The New Orleans Medical and Surgical Journal

Has been purchased by Dr. Augustus McShane, by whom it will also be edited. The price is \$2 a year. Mr. H. C. Smith, 42 Baronne Street, New Orleans, is Business Manager. We have never had cause to say anything but good of this most excellent *Journal* from the time it was edited years ago by the lamented and distinguished Dr. S. M. Bemiss. Dr. McShane comes into possession of this worthy exchange with the advantage of experience as an editor, and it is not promising too much to say of the *New Orleans Medical and Surgical Journal*, under its new management, that it will be conducted on good business principles, and will be kept up as a practical, scientific and useful monthly.

The American Electro-Therapeutic Association

Will hold its First Annual Meeting in the Hall of the College of Physicians, Philadelphia, Pa., September 24th, 25th, and 26th, 1891, under the Presidency of Dr. G. Betton Massey. Physicians interested in the discussion of electricity in medicine, are invited to attend without further notice. Dr. Wm. H. Walling, Secretary, 2005 Arch street, Philadelphia; Dr. Horatio R. Bigelow, Chairman Executive Council.

Peterson's Improved Cataphoric Electrodes.

The article by Dr. Hunter McGuire in our August number on "Cataphoric Treatment," etc., together with the discussion of the subject before the Richmond Academy of Medicine and Surgery (reported in the same number,) have attracted much attention. To make plainer the shape, etc., of the electrodes that should be used for cataphoric treatment, we have secured electrotypes of them from the Waite & Bartlett Manufacturing Co., of New York city. These manufacturing electricians have done more, perhaps, than any other American firm to popularize the cataphoric plan of treatment. In the first illustration of "Peterson's Improved Cataphoric Electrodes" (price, \$6.66,)—the electrode used by



Dr. McGuire—A is a disc, made of metal, cover C is held in place by nut D. It also holds the tip for connecting with the battery. B is a soft rubber ring, which is held in place by A, and at the same time it insulates the skin from A, allowing the current to pass from A to the skin of the patient through the medicated paper contained in the cavity formed by A and B. This electrode is far superior to the old one.

The Waite & Bartlett Manufacturing Co., have made an improvement in this electrode in the way of a long handle, which renders the electrode more useful for deep cavities, such as the vagina, etc. This improved cataphoric electrode is represented by the subjoined electrotpe drawing:



North Carolina and Virginia Medical Examining Boards.

Of the seventy-five applicants for examination to secure licenses to practice medicine, etc., who came before the North Carolina Board during its session in May in Asheville, fifty-one passed satisfactory examinations, and twenty-four were rejected; that is, about 31 per cent. were "pitched."

Of the seventy-seven applicants who came before the Virginia Board during its session in April in Richmond, forty-eight passed, and twenty-six were rejected, and three with-

drew—equal to rejections; that is, about 37 per cent. were “pitched.”

Or, of the total of 152 applicants in both States, ninety-nine passed, and fifty-three were rejected; or about 33 per cent. were rejected in the two States.

The general uniformity of results of examinations by these two separate and distinct Boards is an evidence in itself that the errors of examinations do not lie so much at the doors of the respective Boards, as at the doors of those who present themselves for examinations. Here and there, it may be, a worthy applicant is unfortunate enough to fail; but it is just as evident that the *great majority* of those who apply and fail, are not competent to assume the responsibilities of the physician. The time has come when, to be a doctor, must cease to be a trade or a business undertaking by anybody and everybody. The family or neighborhood practitioner can no longer be allowed to be an incompetent man with the privileges of dealing with human health and life as a carpenter does with insensible material. He must be made to recognize the gravity of his responsibility, and the people have a right to feel that when they send for doctors, they are in the hands of competent practitioners of medicine, so far as the advances in medical science can make them competent.

Dr. John H. Rauch Resigns the Illinois State Board of Health.

The nation of medical men recognize it as a serious loss that Dr. Rauch should have felt called upon to resign (June 30th,) his connection with the Illinois State Board of Health. Until it was done, we had no idea that such a step was in contemplation. He has filled the office of Secretary of that State Board with such efficiency since 1877, as to gain a far more than national renown. To his carefully prepared and accurate reports each year on medical education, and the deductions consequent upon a study of them, is more due, perhaps, than to any other one agency, the recent commendable and rapid strides made by medical colleges towards a higher and a more perfect system of education. It is a disgrace to the secular press of Illinois, or to those newspapers of that State, that they should have entered into a combination “for the specific purpose of destroying Dr. Rauch or—what amounted to the same thing—the usefulness of the Illinois State Board of Health. The complaint made against him was that he was the means of their losing large amounts of advertising from quacks” whom Dr. Rauch

succeeded in driving from the State. While we look upon the retirement of Dr. Rauch at this time as the loss of a valiant leader in the hour of battle, still we feel that he so nearly won the fight, that it will be easy for those left in battle to win the victory over corruption in incompetent or dishonest college faculties, and over quacks and charlatans in general. In the language of the *American Lancet* editorial, "The State of Illinois never has, nor never will, reward him with money in proportion to the value of his services." We hope the day is not far distant when the U. S. Government itself will establish some Bureau having charge of inter-State questions relating to medical education, and that Dr. Rauch will be called upon to preside over it; for the efficiency of his work has been too great to limit his services to the boundaries of any one State.

Dr. J. B. S. Holmes' Sanitarium, Rome, Ga.

Dr. Holmes, whose surgical reputation is national, is building a most excellent "Sanitarium" for the treatment of medical and surgical diseases of women at his home in Rome, Ga., and will be ready for occupancy on October 1st. An institution, so specially built and thoroughly equipped, under the administration of such a surgeon as Dr. Holmes, can scarcely be spoken of as a venture, for it must very soon become a grand success, as it will be a most useful hospital for the invalided woman whose disease is curable. Such institutions are a necessity of the times, and must be popular as soon as their great value is told to the profession and people. See the full page advertisement after reading matter in this Journal.

The Eighth Edition of Wood's Therapeutics

Is announced as ready by the Publishers, The J. B. Lippincott Co., of Philadelphia. Though the seventh edition was issued only three years ago, yet the advances have been so numerous as to necessitate a careful study of more than seven hundred memoirs by the author; so that the entire work has been carefully revised, and a number of the articles have been completely rewritten. Among those portions of the book which are practically new may be mentioned, as important, the whole subject of anæsthetics, the articles upon cocaine, strophanthus, caffeine, antipyrin, antifebrin, phenacetin, hydrastine, paraldehyd, lead poisoning, etc. Among the absolute new articles may be mentioned sulphonal, chloralamid, aristol, and others.

New England Medical Monthly for September, 1891,

Is a souvenir edition, published at the close of the tenth year of its existence. It is printed on coated paper, embellished with a number of excellent portraits of some of the eminent contributors to the original departments of the journal, with an autotype group of the Editor and the staff associate Editors. The great success of the *New England Medical Monthly* shows what may be accomplished when undertaken by one man such as its wonderfully active and progressive Editor, Dr. Wm. C. Wile. We wish for this journal, its Editor and his corps of associates long health, growing wealth and success in all that they undertake.

Membership in the American Medical Association.

This is obtainable at any time by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary in order to obtain membership. On receipt of the above amount, the weekly *Journal of the Association* will be forwarded regularly.

Congress of American Physicians and Surgeons.

The Second Annual Session of this Congress will be held September 22, 23, 24 and 25, 1891, in the Main Hall of the Army Building, 1412-1414, Pennsylvania Ave., Washington, D. C. This Congress is made up of invited guests and of the membership of the American Surgical Association, Association of American Physicians, American Climatological Association, American Gynæcological Society, American Laryngological Association, American Neurological Association, American Orthopedic Association, American Otolological Society, American Ophthalmological Society, and American Physiological Society. These several Associations and Societies are practically but Sections of the Congress—the general session of which will be from 3 to 6 P. M. A registration of \$5 will be required of every member of the constituent Societies. Dr. Samuel C. Busey, 1545 I St., N. W., is Chairman of the Committee of Arrangements for the Congress.

Southern Surgical and Gynæcological Association.

The Fourth Annual Session of this Association, whose object is "to further the study and practice of gynæcology among the profession of the Southern States," is to be held in Richmond, Va., Tuesday, November 10th, 1891. Dr. Hunter McGuire, ex-President of the Association, is Chairman of the Local Committee of Arrangements, and we may safely promise for him and his efficient Committee, that ample arrangements will be made for the suitable provision of members and guests who may attend. Dr. L. L. McMurry, of Louisville, Ky., is the President, and is actively at work to secure a profitable session. Dr. W. E. B. Davis, of Birmingham, Ala., who is fast approaching a position of distinguishing eminence in abdominal surgery especially, is Secretary; and is all the time displaying a zeal and an energy in the cause of the Association that has brought it already to the very front rank of special semi-National medical organizations. We are glad to announce that the attendance expected will be large, and that the papers promised will be numerous and by authors of distinction, and on topics sufficiently diversified to afford interest to any one who is at all devoting attention to questions in surgery or gynæcology. We will have further notices of the approaching session in our issues for October and November, based on such information as we may secure from the officers.

Febriline—Price Reduced 33 $\frac{1}{3}$ Per Cent.

Febriline, or *Tasteless Syrup of Quinine*, is deservedly growing more and more popular in all malarial sections, as it enables us to give quinine even to children without resistance—in fact, they rather like it than otherwise. To call attention to such a remedy that possesses all the virtues of quinine, *except its bitter taste*, ought to be sufficient to lead to its general adoption in practice—especially now that the manufacturers (Paris Medicine Co., of St. Louis,) announce that they have reduced the price one-third. See advertising page 31.

Microscope Wanted.

A subscriber wants a second-hand microscope in good order, and power of about 300 diameters. Any subscriber possessing such an instrument, wishing to dispose of it at a moderate price, may find a purchaser by giving description, and naming price. Address, "Microscope," Box 902, Richmond, Va.

Parke, Davis & Co.'s Malt with Cod Liver Oil.

The recent report of the Chairman of the Committee on Adulterations of the New York Pharmaceutical Association, Prof. Robert. C. Eccles, M. D., Government Chemist for Inspection of Medical Supplies for Department of the Interior, etc., gives analyses of the three best known preparations on the market, and reaches the conclusion already arrived at by the previous analysis by Prof. R. H. Crittenden, of the Sheffield Scientific School of Yale University, that only the product of Messrs. Parke, Davis & Co., was true to the claim made by its makers as to the percentage of cod-liver oil. A copy of this report will be mailed to physicians requesting Messrs. Parke, Davis & Co., of Detroit, Mich., to do so.

Medico-Chirurgical College, Philadelphia.

The following changes have been made in the Faculty: Dr. C. E. Stunns, Emeritus Professor of Clinical Surgery; Dr. W. S. Stewart, Emeritus Professor of Obstetrics and Clinical Diseases of Women; Dr. H. E. Goodman, Honorary Professor of Surgery, Clinical Surgery, and Orthopædics; Dr. J. M. Andrews, Professor of Principles and Practice of Medicine, Clinical Medicine, and Hygiene; Dr. E. E. Montgomery, Professor of Obstetrics and Gynæcology; Dr. Ernest Laplace, Professor of Surgery, Pathology, and Clinical Surgery; Dr. W. F. Waugh, Professor of Clinical Medicine.

Tuberculin in Tubercular Diseases.

Whoever reads Dr. Karl von Ruck's article in this issue with a mind open to conviction, cannot help feeling that the pendulum of professional opinion as to the value of tuberculin has swung too far away from a proper appreciation of its value. The records of his Sanitarium in Asheville, N. C., "The Winyah" (advertised on the white cardboard facing advertising page 50), which have recently been published, prove conclusively that tuberculin, with other appropriate treatment, aided by a suitable climate, does often effect cures of consumptives.

The American Dermatological Association.

The Fifteenth Annual Session will be held at the Shoreham Hotel, Washington, D. C., September 22, 23, 24, and 25, 1891. The printed programme promises an excellent meeting. Dr. F. B. Greenough, of Boston, President; Dr. Geo. Thos. Jackson, of New York, N. Y., Secretary and Treasurer.

Applicants for Medical Corps, U. S. Army.

Surgeon-General, Dr. C. Sutherland, will convene an Army Medical Board in New York, N. Y., during October, to examine candidates for appointment in the Medical Corps of the Army. Applications should be received by the Secretary of War before September 15th, for the necessary invitation, stating date and place of birth, place and State of permanent residence, the fact of American citizenship, name of Medical College from whence graduated, and a record of hospital service, if any, from authorities thereof. Accompany the application with certificates of two reputable physicians as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and must submit his diploma of graduation from a recognized regular medical college.

The Mississippi Valley Medical Association

Is to be held in St. Louis, Mo., October 14th, 15th, and 16th. The President, Dr. C. H. Hughes, of St. Louis, the Secretary, Dr. E. S. McKee, of Cincinnati, the Chairman of the Committee of Arrangements, Dr. I. N. Love, of St. Louis, as well as many others of the officers and members have been working zealously for the success of this meeting, and now have every promise of a most excellent one. A full programme of interesting papers has been prepared, and provision has been made for the fullest, freest, and most complete discussion of the same. Dr. Love, as Chairman of the Committee of Arrangements, invites all eligible readers of this Journal, together with their wives, etc., to attend, with the promise that they will be received and welcomed in a regular warm-hearted St. Louis style.

During the session of this Association, it has been proposed to have a meeting and Conference of the *Medical Press Association*.

Dr. Halstead Boyland,

Formerly Professor in the Baltimore Medical College, has permanently located in Paris to practice his profession—having passed with distinction the ten State examinations, and obtained the highest mark on his thesis—*Des Glycosuries non Diabetiques*. Of the six American physicians allowed to practice in Paris, only two of them have previously done this. His address is 73 Avenue d'Autin.

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RICHMOND, OCTOBER, 1891.

Original Communications.

ART. I.—The Cardiac Complications of Diphtheria.

By WM. C. DABNEY, M. D., of Charlottesville, Va.

PROFESSOR OF PRACTICE OF MEDICINE, ETC., UNIVERSITY OF VIRGINIA.

There are few diseases, if any, which exert so powerful an influence on the action of the heart as diphtheria, and in many cases the cardiac symptoms occur at a time when the other symptoms are passing away or have entirely disappeared.

I propose to describe briefly, in this paper, these cardiac complications as I have met with them in my own practice, and especially one to which but little reference is made in works treating of diphtheria, and which is apparently of rather rare occurrence, and of the most serious significance.

The cardiac complications of diphtheria usually occur in one of three forms:

1. A rapid and feeble pulse, often irregular in force and rhythm.
2. A feeble pulse, which becomes progressively slower till

the beats number less than *forty*, sometimes less than *thirty* to the minute.

3. A sudden failure of the heart when all other alarming symptoms have disappeared.

I do not propose to include those cases in which endocarditis occurs in connection with diphtheria.

The first form of cardiac trouble which I have mentioned is rather a symptom than a complication, as it is present in a great majority of the cases. It is clearly due, for the most part, to the diagnostic changes which occur in the cardiac muscle in this disease, and to the general prostration accompanying it.

Nor is it necessary, as was formerly supposed, for the temperature to be high for such degenerative changes to occur. In the severest cases of this disease, the body heat is often but little elevated, and the absence of fever, therefore, does not furnish any guarantee that serious heart complications will not occur.

A further cause of this heart weakness is found, perhaps, in the poisoning by the leucomaines generated by Löffler's bacillus.

The period of the disease at which cardiac weakness of this character occurs, depends, of course, upon the gravity of the affection in the individual case, and upon the vigor and resisting power of the patient. Though just here it may be said that there are few diseases in which previous good health is of so little assistance as in diphtheria—the most vigorous and robust children often succumbing with frightful rapidity. In some cases the heart prostration is often marked in less than forty-eight hours, and sometimes in less than twelve hours.

The second form of cardiac complication is much less common than the first, and seems to be more common in some epidemics than in others. It is rarely mentioned in books on diphtheria. My attention was first called to it by the late Dr. Alex. Harris—a very careful and accurate observer—during an epidemic of the disease which occurred in Culpeper county, Va., about ten years ago.

In many cases which I have seen the earlier symptoms presented no special gravity, but after a week or ten days, when all false membrane had disappeared, and the patients seemed to be on the high road to recovery, the pulse, which had been quick and feeble, would gradually become slower without any marked improvement in force. There was a gradual diminution in the frequency of the pulse from day to day—sometimes even from hour to hour—until it fell to *forty* or even *thirty* beats per minute.

The only other symptoms noticeable in the cases were exhaustion and some degree of restlessness. In no case was there any paralysis of muscles, nor were there any other evidences of multiple neuritis. There was no irregularity of rhythm in the cases, as a rule, nor was irregularity in the force of the heart's beat as marked as in the first class of cardiac complications.

It is difficult to explain the slow and feeble pulse in this class of cases. It is not probable that it was due to any toxic action of the leucomaines, because no other evidences of severe poisoning were present; nor is it likely that it was caused by degenerative changes in the heart muscle itself, because such changes are of common occurrence in other of the acute infectious diseases—especially scarlet fever and typhoid fever; and yet such slow action of the heart has only been observed in diphtheria. It seems to me, in spite of the absence of other evidence of degenerative changes about the nerves, that the slow pulse in these cases is due to a degenerative change in the nerves connected with the heart; but I have been unable to obtain a post-mortem examination in any of the cases which I have seen, nor do I recall any autopsies made in similar cases by others.

The third form of cardiac complication, is that in which, after convalescence seems to have been fully established, death occurs suddenly from heart failure. In some of these cases the heart failure has occurred after unusual exertion or excitement, but sometimes it occurs during sleep. I recall distinctly the case of a little girl who was apparently entirely convalescent from a moderately severe attack of

diphtheria, and who had been playing about the house with the other children. Her mother put her to bed as usual, and was shocked to find an hour afterwards that she was dead. No explanation of such cases has yet been furnished.

The cardiac complications of diphtheria have a most important bearing on the prognosis of this disease.

That a *rapid* and feeble pulse is of serious if not unfavorable significance is universally acknowledged; but it is far less ominous than a *slow* and feeble pulse. I do not recall a single instance in which recovery occurred when the pulse has fallen as low as *forty* to the minute; but as I am away from my records I may be mistaken about the exact figures; certain I am, however, that of all the cardiac complications occurring in connection with diphtheria, except that in which the heart failure is immediately fatal, a slow pulse is the most serious.

In view of the gravity of the cardiac complications, *prophylaxis* is of the utmost importance, but, unfortunately, it is often of no avail.

Absolute quiet—confinement to bed and the avoidance of all excitement—is of the first importance even in mild cases, both as a prophylactic and remedial measure.

In January, 1888, I attended a girl 13 years old in a mild attack of diphtheria. The membrane disappeared from the fauces in four or five days, the exhaustion was not marked, and I was flattering myself that the case was approaching a favorable termination, when the pulse began to diminish in frequency. The child had been kept in bed throughout the attack, and had not been up since its commencement. The pulse gradually became slower and slower, and was very feeble. I urged upon her and her mother the necessity for absolute quiet in the recumbent position; but one day, when the pulse was a little over thirty to the minute, the child raised up in bed for some purpose and fell back dead.

It is impossible to tell the effect of any other prophylactic measures which may be used, because this form of heart failure is of rare occurrence at any rate.

The remedial treatment has been entirely unsatisfactory in those cases where the pulse become slow. Strychnia, atro-

pia, brandy, ammonia, ether, and the other cardiac stimulants and tonics, I have tried without the slightest benefit that I could perceive. Recovery would sometimes occur under any treatment, in the milder cases, and death invariably occurred in spite of all treatment in the severer ones.

The *treatment of the disease*—not the cardiac complications especially—which has seemed to me to give the best results, has been the free use of brandy, muriated tincture of iron, and bichloride of mercury. The pharynx is thoroughly sprayed every hour or two with a solution of menthol and boracic acid in alcohol and water, and then the patient is given the muriated tincture of iron and corrosive sublimate in glycerin. A glycerin solution is used in order that it may stick to the pharynx as it passes over it, and the patient is not allowed to take any food or water for half an hour afterwards, lest the antiseptic substance be removed from the throat.

The solution of menthol and boracic acid not only cleanses the fauces and pharynx, but the menthol lessens the sensibility so that the burning effect of the iron and bichloride solution is, in great measure, prevented.

Cocaine would, of course, diminish the sensibility still more, but I have always been afraid of some untoward result from its use in these cases, and the menthol answers every purpose.

ART. II.—Washington Malaria and Politics as Genetic Factors in Nervous Disease.

By IRVING C. ROSSE, A. M., M. D., F. R. G. S., of Washington, D. C.

PROFESSOR OF NERVOUS DISEASES, GEORGETOWN UNIVERSITY.

In accordance with natural law, ideas are more or less tintured by the times in which one lives, and the mind may become saturated with the prevailing notions of the age, without being out of harmony with the conditions in which one is placed. So, among the varied circumstances attending life in our parliamentary city, with its reputation

for ague and political intrigue, it is not necessary to stand head and shoulders above one's fellows, nor even to step out of the crowd, in order to witness the daily manifestations that furnish observant and receptive medical men not only with food for reflection, but with material that may be turned to practical advantage.

Much of the talk about Washington malaria is partly and conditionally true, while some of it comes under the old classification of a term that is said to be used to hide ignorance. Like a dog with a bad name, our city comes in for an unmerited reputation, which the recent march of haussmanization has in a measure done away with; yet many vague generalities concerning this earth-born poison still cling to the mind as survivals, both among the people and among physicians. It is, however, not so easy to tell just what malaria is. In fact, the attempts to explain its essential nature have given rise to some of the veriest nonsense. On the one hand, it is claimed that a micro-organism is concerned in its production; on the other, the metaphysical idea of the marsh is thought to act as an occult power. In the present development of the subject, the *bacillus malariae* conveys something of a sensuous notion that seems to satisfy an order of mind not content with studying phenomena only. However, if we may judge from the many contradictory statements concerning the *bacillus* and *plasmoidium malariae* as diagnostic elements in paroxysmal fevers, the specific cause seems to be yet unsolved.

I have known all the common affections incident to atmosphere, vicissitudes, bad cooking, and irregularity of living that obtain in Washington to be attributed to malarial poisoning. The Hon. Bardwell Sloat, Col. Sellers, or the Member from "Wayback," comes to Congress, goes around all night, feels very seedy next morning, and is thereupon duly chronicled in the press as being confined to his room with an attack of malaria.

I have also seen Bright's disease, chronic alcoholism, and even basilar-meningitis and syphilis mistaken for malaria, and treated as such. I have in mind the case of a prominent

political man who died here a few years since of what was supposed to be malaria that he had contracted at the mouth of the Ganges river on a tour around the world. A young friend of mine, called in to make the necropsy, ventured the opinion to the attending physician—a practitioner of many years—that the patient had died of cancer of the stomach. He was met with the crushing remark, “Young man, you have yet a great deal to learn.” The knife, however, soon revealed a state of affairs antithetical to the tone of superior wisdom assumed towards the fledgling, and greatly to the discomforture of the old practitioner, who was shown a well-marked case of cancer of the pyloric orifice.

To be more explicit, I will mention a few cases out of many of the kind that have come within the range of my specialty:

Among the earliest cases of *locomotor ataxia* that I saw in Washington was one of a poor fellow in the last stage of the disease with trophic changes and the like, who had been treated for malaria and had been made to exercise until he broke down. He died shortly after I saw him.

CASE II. The next case, that of an old stager, a former captain in the army, who had been the rounds of many physicians, was seen January 20th, 1886. His army medical record showed him to have suffered from “malarial poisoning, rheumatism, disease of the heart, disease of the eyes, also bladder or urinary organs, and of liver and spleen,” for all of which he drew an invalid-pension from the Government. His subjective history, when compressed, amounted simply to this: pains in eyes and legs and in urinary organs; sometimes sees things double.

All his symptoms showed well advanced dorsal tabes. No splenic or hepatic enlargement. No external evidence of rheumatism. Is fairly well nourished; 5 feet 9 inches; 157 pounds. Action of heart excited and irregular; a systolic bruit over its apex; pulse 120. Incontinence of urine. Atrophy of right os calcis.

CASE III. Incontinence of urine was also present in a case seen February 16th, which for many years had been treated as one of “malarial poisoning.” The patient stated that he has to urinate frequently during the night; has cramps in feet and toes; has been impotent for last six months, and is losing his memory. Is sensitive to cold;

vomits at times, and throat troubles him. Had partial paralysis of left side about eighteen months ago, and about three months since an attack of erysipelas.

This man was 45 years old, 5 feet 5½ inches high, and weighed but 96 pounds. His tabetic walk was difficult and unsteady; the usual defects of co-ordination and of diminished sensibility were present, as well as the existence of marked melancholia. The eye-grounds were, however, normal in appearance, and there was no loss of co-ordination in the ocular muscles. Hearing of right ear $\frac{1}{48}$; left, $\frac{6}{48}$. Both tympanic membranes normal in position and appearance; heard conversation at 20 feet. No splenic or prostatic enlargement, and no hepatic symptoms. Incontinence of urine, and this excretion loaded with phosphates. Catheter No. 9 passes readily into bladder. No evidence of syphilis.

CASE IV. Another typical instance of lesion of the kinesthetic system came to notice on June 3d, 1887. It is that of a physiological bankrupt of 63 years, the diagnosis of whose complaint appears to have been a matter of extreme difficulty, since a mere enumeration of the various ailments for which he had been treated would take a large slice from the nosological table. Some of his disabilities were "deafness, disease of the left side the result of malarial fever, and resulting affections of the head, heart, and left knee.

The salient points of this patient's malady, as described by himself, were a whirring noise in both ears; pains in the whole left side of body, including the left side of the head, at which point it was not severe; extreme palpitation of heart after exertion; and almost total inability to breathe at times, when he feels like swooning away.

Cardiac and gastric disturbances were well marked in this case, with debility, insomnia, and tremulous tongue; difficulty and unsteadiness in walking; tendon phenomena; muscular incoordination; and the usual symptoms that go to show the existence of locomotor ataxy.

CASE V. "Malarial poisoning, rheumatism, and resulting disease of heart" perhaps never showed themselves with more vagueness than in the following case:

April 14th, 1886. Man of 54; occupation, seaman; hails from a malarious locality in Virginia; is 5 feet 8¾ inches high; weighs 150 pounds. Says he has lost all use of right side; that his heart thumps; is short-winded; sleeps badly, and has lost his memory.

This man's complexion was somewhat sallow, and his tongue slightly furred; but there were no splenic or hepatic

symptoms, nor any hæmorrhoids, evidence of rheumatism or of heart disease. Muscles of right side considerably atrophied; circumference of leg two inches, of right arm one inch less than that of left. Tactile and thermic sensibility of right half of body impaired. Well-marked ataxic symptoms, exaggerated knee-jerk, and ankle-clonus. Hearing, right ear $\frac{2}{48}$; left, $\frac{6}{48}$. Both tympanic membranes much sunken, and handles of mallei thrown into sharp relief. Left Eustachian tube much narrowed. Presence of nasopharyngeal catarrh accounts for impaired hearing. Evident mental impairment, disorder of the memory being very marked, and limited to elementary and primitive cognitions; perception imperfect; ideas very limited; no imagination or æsthetic sense to speak of; will feeble; and at time of examination, patient was without delusion, when regarded from an objective point of view. Symptoms, those of phrenasthenia, and of advanced physical and psychophysical degeneration.

The last case that I shall take occasion to mention is that of a merchant of Washington, a middle-aged man, who complained of being "chock full of malaria all the time;" was getting steadily worse the longer he remained South, but got better on spending a few weeks at his former home in New England.

To go into further details would be to repeat much that has already been said regarding this class of cases. The man's trouble was simply tabetic, and he probably never had suffered from the effects of malaria.

I do not pretend to say that Washington is not malarious. All Southern cities, and some Northern places too, for that matter, are more or less subjected to this influence. Inter-mittent fever, I learned on a trip to Alaska, had prevailed to some extent at Cook's Inlet, and I have seen a case on board a ship in the ice while off Wrangell Island. It must be said, though, that the disease was originally contracted on the Chagres river.

In a medico-topographical sense, the riparian climate of the Potomac is not conducive to the highest state of health. A few years ago malarial fever prevailed to such an extent at the Washington Arsenal and at Fort Washington, on the Potomac, that there were not enough well men to do guard duty. The latter post was abandoned mainly on that ac-

count. At Fort Foote, opposite Alexandria, days have occurred when there were but three persons in the garrison who did not suffer from ague. An officer who served at that post fifteen years ago, suffered from the effect of malaria whenever the weather changed, notwithstanding the fact that he had served most of the time since in non-malarious localities.

Of course such conditions do not obtain in the better parts of our city, which, owing to sanitary and other improvements, notably the extensive tree culture, compare favorably with other towns as regards the showing of vital statistics. Indeed the records show that New York, Boston, Charleston, Hoboken, Lowell, Mobile, Newark, New Orleans, Savannah, Brooklyn, Jersey City, and a majority of other towns, have a higher death rate than Washington. Besides, the young men, who had their aquatic training on the Potomac, lately took the first honors at the Staten Island Regatta. Long personal experience and observation of the boating clubs convinces me of the rarity of malarial manifestations among the men who frequent the river—a fact in favor of the natural advantages of healthy tissue and normal function. My only daily swim of an hour or two in the Potomac during the last three summers that I have been obliged to stay at home, resulted in ravenous appetite, sound sleep, and general good condition. On the other hand, I know of a number of young men from the North employed in the public offices, who slept a few miles out of town at a more elevated spot. Nearly all of them had fever, one typhoid, and one has since died.

The cause of most of the so-called malarial diseases that prevail here in summer and autumn is the abuse of alcoholic drinks, the immoderate use of ice water, and the neglect of ordinary hygienic rules. Though not a teetotaler, I am a strong advocate of temperance, and have no particular fault to find with Potomac water, which, in the analytical table of the water supply of the principal cities of the United States, stands fourth in purity; yet I am inclined to agree with our German friends who look upon ice water as

ein Gift. In fact, there is ample evidence to show the influence of drinking water in originating and propagating malarial fevers. I could mention a long enumeration, to which I could add personal experience, while serving with troops at malarious points on the Savannah, the Mississippi, and Rio Grande rivers, and while traveling in Africa. With a hydrophobic dread for the element in question, except for washing and swimming, I was about the only person to escape fever on the fore-mentioned occasions. Ice is no doubt a great boon in many instances, but it would be much better for the general health of a community like ours, constituted as it is of such a motley population, if less of it were used.

Amid much of an opposite character, one will not find relatively in any other city than Washington more persons of broken fortune, dead hopes, and bankrupt nervous systems. The National Capital appears to be the Mecca of such people, as well as the dumping-ground of the indigent negro. Here have been observed survivals of the phallic element and of vadouism, that still mark the trail of the serpent in the African race. In the street crowds, may be seen countenances that are speaking epitaphs of long-dead ambition and energy. One may meet in the public places not only the "Jedges" and "Kurnels," who frequent the hotel lobbies, but the Patent Office and Library cranks, strange grades of queerness and political asphyxia, and talk face to face with men of the Guiteau stamp and Col. Sellers conformation. In the course of events, a certain proportion of these great legislators, inventors, and the like, ultimately overstep the border line to join the lists of hopeless paretics and dements that crowd our asylums.

The question is often asked concerning politics as an impelling cause of brain and nervous disease. All the evidence that I have collected for several years on this point, both at home and abroad, goes to show that during great political commotions such diseases are less frequent. My friend, Dr. Charles K. Mills, of Philadelphia, who has investigated this subject, shows that our statesmen and public

men do not remain in active life so long, on the average, as Englishmen engaged in similar careers. For instance, there were, and are, Lord Melbourne, Earl Grey, Lord Aberdeen, Earl Derby, Lord Beaconsfield, Lord Palmerston, who died as premier at 81 years; Lord John Russell, whose long and active political career ended only with death at 90, and Mr. Gladstone who is now in his 82nd year. Without discussing the causes which lead to long life, it may be said generally that the cultivation and practice of vigorous bodily habits and outdoor sports conduce largely to that end.

Many people, speaking of politics as the cause of nervous breaking down, confound cause and effect, as in naming religion as a cause of disease. As a matter of fact, it is not the cause that constitutes disease; the malady is constituted by the perversion that results from the cause. Cold may cause bronchitis, yet in this instance, the physician does not treat the cause, but the effect; and a fall may cause fracture of a leg, in which case the surgeon treats the fracture—not the fall. Causes produce trouble in organs or in functions, but the trouble alone constitutes the malady. These principles are general and applicable to all pathology, and mental and nervous diseases are no exception to the law.

Politics, no more than religion, can be considered as a prolific or common cause of nervous disease, but rather a symptom that lends color to disease. Nor does the stress of political life or a residence in the republican city of conventicles and Congress in any way tend to impair the integrity of the neuroglia of the central nervous system. Absence of life and bustle of great commercial towns, the languor of the climate, and the spirit of delay that pervades all classes, rather contribute to the serene quiet that an overworked and sleepless sufferer so much needs. It is a matter of record that more than one New Yorker has been cured of insomnia on listening to the prosy stories to be heard in a certain club in Washington. I may quote the simple and trite observation of the sable Virginian who fetches my breakfast, which led him to remark, in contrasting this with other cities he has visited, that "Every day here 'pears like Sunday, even after coming from a place like Philadelphia."

ART. III.—Inebriety—Thoughts on its Origin, Nature and Treatment.

By T. L. WRIGHT, M. D., of Bellefontaine, Ohio.

It is a fact well established among alienists, that constitutional diseases of the nervous system *often change their forms*. And this occurs, not through force of heredity alone, but sometimes such changes may happen in the life and experience of a single individual. Blandford recognizes this fact in his work on *Insanity and its Treatment*. Maudsley, D. Hack Tuke, Bucknill, Wynter, Winslow, as well as other authorities, concur in opinion on this subject.

But it is difficult to conceive of the truth of all this without the inquiry instinctively arising in the mind: What are the original sources of the several forms of constitutional nervous disease? Are they few or many? If any one of them may be so readily transmuted into some other and different one, may it not be true that, primarily, only a very limited number of the nervous forms of disease—of the neuroses—were in existence? Might not the larger proportion of the separate and distinctive forms have been produced by the simple law of the transformation of the neurotic features? Certain persons even doubt whether dipsomania is truly a neurotic form at all—interchanging with insanity, epilepsy, chorea, and the constitutional latency of the moral faculties.

While the best authorities agree, however, that dipsomania is a form of unstable constitution, and is amenable to the law of substitution by other well-known neurotic diseases—what is there to contradict the assumption that dipsomania is, itself, the oldest and most powerful neurosis amongst them all? What is there unreasonable in the idea that dipsomania is not only *not* a feeble and doubtful member of the family of neuroses, but that alcohol is, in fact, the chief and most active parent of that family? Alcoholic excess is as old as any written records of the personal habits of mankind. The second great progenitor of the human family seized the first possible opportunity to achieve intox-

ication in his own person—helpless, insensible, bestial; and the practice and spectacle of insensate drunkenness has continued without interruption, like a sweeping and resistless torrent, till this day. Is there anything strange, anything improbable, in the supposition that alcohol, through the physical changes wrought by its habitual use, is the most potent agent in the production of those neurotic diseases that now are scourging the human race?

Here may be seen, possibly, the true explanation of a great deal of insanity and crime—of kleptomania, pyromania, and other forms of mania; as well as of the establishment of a number of diseases, such as heart-troubles, asthmas, neuralgias, forms of hypnotism, and an endless variety of analogous affections.

Of course there are episodes in life that act as aids to the great and central power of alcohol. Yet these are, after all, of secondary and inferior power in the production of constitutional neurotic diseases. Chief among them, may be observed physical injuries and profound diseases—the latter arising from the operation of some kinds of atmospheric or of animal poisons—as from so-called *malaria*, or from *contagion*.

The facility with which alcoholic liquors could be obtained, even in times of remote antiquity; the alluring and seductive, but deep and abiding impressions of alcohol upon the prominent characteristics of humanity; the power of example and habit in spreading abroad the alcoholic influence, as well as in sustaining the alcoholic besetment in families; the physical changes induced by a steady alcoholic career, within the substance of important organs—as the liver, the lungs, the heart, the nerve trunks, and the brain; the strong affinity that exists between the brain-tissue itself, and alcohol—making it almost impossible to separate the two substances from each other by either mechanical or chemical procedures—these considerations, and many others of a similar import, raise a presumption amounting almost to a moral certainty, that the unspeakable horrors brought upon human kind through the influence of the neurotic family,

have, in fact, their principal origin in the tremendous power and detestable qualities of alcohol. It is well to think of this when facing insanity, idiocy, hysteria, and epilepsy; and it is well to remember it when contemplating the crimes of of a young man or young woman "gone wrong," in whom the moral powers were made unsteady and inharmonious through the unhappy possession of a neurotic temperament.

But these considerations, while plausible, necessarily lack the elements of demonstration. The human mind has not been steadily directed to these subjects, and human life is too short to easily collect satisfactory data upon which to base definite conclusions.

There are, however, other elements which legitimately enter into an inquiry respecting the palpable and ever present phenomena of inebriety, and which are too important to ignore. They go a great way in explaining the nature of inebriety as an obvious and certain disease, and, in fact, in many instances, they clearly define the foundation and boundaries of the alcoholic malady. There are several distinct diseases with which inebriety may be so closely united that its nature and treatment are materially influenced by them.

Inebriety may sometimes be considered not only as a disease in its own intrinsic nature; but it may also be considered as a product or representative, or better yet, a *sign* or symptom of some other pre-existing malady.

The former is usually the topic discussed in treating of the nature of inebriety; and the literature of the subject is full of disquisitions from the standpoint of self-sustaining and uncomplicated disease.

I will confine myself, mainly, to a consideration of *inebriety, as closely associated with other previous, or, it may be, concomitant morbid conditions.*

In the immense variety of constitutions incident to humanity, there must arise many instances where persons are found possessed of natures very much below what is common to people in general. Great imperfections appear that are the direct outcome of some serious ancestral defect. Such

incompleteness may show itself in physical malformations, as well as in peculiar moral or mental susceptibilities. Serious imperfections of structure are necessarily attended by inadequacies of function. This rule is applicable equally in deficiencies of the grosser bodily organs, and the fine and delicate textures of the nerve centres.

For instance: There are, perhaps, few more common physical derangements in the habitual inebriate, than those of the heart. Excessive alcoholic indulgence has a direct tendency to inure the walls and valves of the heart; and also to derange and dilate the caliber of the larger blood-vessels. But notwithstanding this, there are many instances where heart disease precedes inebriety. What was the condition of the heart before the drinking habit was formed? Who knows how much a congenitally defective heart has had to do in driving its possessor to drink? Hereditary heart affections are far from uncommon, although they have existed, sometimes, throughout life, without their real nature being known to the sufferer. Sudden deaths not infrequently attest this fact.

But a person with heart disease is apt to be unsteady and distressed, both in his mind and disposition. At one time, when there are no complicating troubles, the circulation is propelled fairly well throughout the regions of the brain. Life is cheerful. Mind is active and acute, and the feelings are agreeable. Again the same heart acts badly—perhaps the liver, or stomach, or kidneys fail in function. The circulation is weak and insufficient. The brain and nerve centres suffer in common with the system at large. The mind is slow, stupid, melancholy. Irritability of temper, sullen anger, universal distress prevail, and assume control.

And now, either by accident or premeditation, the alcoholic potion is taken. Instantly a most welcome relief is experienced. The undefined, but wide-spread and nagging pain and discomfort are assuaged by the anæsthetic effects of the draught. The circulation for the time being resumes its volume and force. The sluggish current of unaërated and stale blood is forced onward through the lungs and

brain, and it is replaced by a supply of fresh blood of superior vitality. Care and trouble depart at once, and the mind finds solace in the unsubstantial dreams and delusive fancies of partial intoxication.

The man with heart disease is a man of *moods*; just as the dipsomaniac is a man of *moods*; and sometimes the cause of them is, in the two persons, precisely the same. It is heart disease. An important fact now comes into view. Heart disease is one of the most common forms of heredity; nor is it essential that in alcoholism, ancestry should owe heart disease to the alcoholic habit. It may be congenital from causes apart from the inebriate diathesis—from a family strain of rheumatism, for example. Parents, therefore, who drink to alleviate (though unconsciously), the distress arising from deranged heart function, will not unlikely be followed by sons, who will also drink in consequence of heart disease. Here it is the cardiac affection, not the inebriety, that strictly is hereditary. Alcohol is always a fraud and traitor, and it is true that while it may relieve the pressing symptoms of deranged heart function, it really intensifies the pathological conditions which underlie the whole matter; for it is certain that its tendency is (whatever may be the reason for taking it) to produce heart imperfections *de novo*. Of course these, also, may become constitutionally impressive and hereditary.

But physical defects, other than those of the heart, may likewise tend to the development of the dipsomaniacal character. Serious imperfections of the lungs sometimes lead to habitual inebriety. The respiratory functions and the circulatory, alike, may, from lung troubles, be attended with difficulties; and these, possibly, may be alleviated by the alcoholic influence.

Hereditary brain affections are frequently encountered, and they, too, may invite the intervention of alcoholic anæsthesia. The profound neurasthenia shown by forms of megrim and neuralgia, is usually constitutional, and it is not infrequently a source of inebriety. But it is certain that inebriety may become hereditary through definite

qualities and forces inherent in its own nature. The damage inflicted by alcohol upon a given organism may be so profound and extensive as materially to impress and direct the movements of the whole constitution. It is in cases of this kind that inebriety clearly displays its own hereditary power and properties.

It is apparent, therefore, that the so-called "appetite" for strong drink may come from widely different sources, and may possess various qualities. The fundamental character of this appetite or "thirst," evidently may be such as to preclude the idea that it may be overcome by the mere application of a simple antidote, or alcoholic incompatible. Usually, it is not the *taste* that allures, but it is the *effects* of alcohol upon the feelings; and yet there are persons to whom the alcoholic taste is agreeable, but who derive no pleasure from intoxication. In dealing with constitutional appetites, it is well to be sure that certain natural propensities and appetencies are not disturbed. Danger of this kind, however, is probably not very menacing.

It is wise to consider the origin, as well as the features of drunkenness and dipsomania, in any scheme of treatment, remembering that intoxication is one thing, and inebriety, in its broad sense, is another.

In some instances, moral influences occupy a prominent place in treatment; but in a very large proportion of cases, this influence should include kindness and sympathy. While punishment and jails may become necessary to protect society from injury at the hands of a maniac, they are not to be commended as means tending to reform. There is an instinctive conviction in the mind of every inebriate who is punished, that he is wronged thereby, and he is apt to become hardened and exasperated. At any rate, facts show that jails are not reformatory institutions for inebriety. At other times, intelligent instructions, especially to the young, when kindly given, avail much. Again, hygienic appliances—as seclusion, baths, the exercise of the brain functions (through the mind and emotions) on new and better subjects, through the agency of new scenes, new

topics for thought and new associations—are proper. Medicines, too, occupy a position of power and usefulness, not as the main dependence, but as powerful aids to the operations of time and nature; and yet, so many elements enter into the inebriate constitution, that a certain mixing of all these means of treatment is required to obtain the best results. Retirement in a well-ordered retreat is also of advantage, and is sometimes indispensable in the preliminary treatment of severe cases.

Ordinarily, in treating inebriety, we have to contend, not with an appetite or proclivity alone, but also with wofully degenerated and impaired physical organism. This implies that often the element of *time* must enter into the treatment of the case, and this means the withdrawal of the cause of the trouble (alcohol); and at the same time, it means an appeal to the conservative powers of nature for help.

It is not to be expected that a systematic account of the *treatment proper for inebriety* will here be given. A very few only of the principles applicable to the subject will be noticed.

It is needless to speak in this place of the powers of the human constitution in the reparation of physical injuries. They not only may supply deficiencies, but they also remove redundances—hypertrophies, tumors. In the chronic inebriate, the hyperplasia of portions of the connective tissue has often wrought serious damage upon the integrity of important organs. In rectifying this, nature operates surely, but slowly, atom by atom being moved, and time is essential.

In aid of the efforts of the constitutional powers, certain alterative medicines may usefully be employed. Among several of these, calomel, probably, stands first; but it should be administered in exceedingly minute portions, and for a long period of time. It should be continued for many weeks, and even months, in portions of from one-thirtieth, one-fiftieth, or even one-hundredth of a grain, two or three times a day—there being brief interruptions in

the treatment. The object should be, not to supplant nature, or compel her, but to uphold and gently assist her efforts.

The iodides are not admissible in uncomplicated cases of inebriety. The heart is generally injured—it is always weak—and the iodides are likely to do more harm than good. Heart tonics will be often required as adjuvants.

For the epileptoid form of inebriety, known as dipsomania, when it appears after serious injury to the head, the treatment should be directed to lesions of the brain. Relief may be reasonably expected, sometimes, by the simple elevation of a portion of depressed skull.

Tonics, especially strychnia and other bitters, may prove useful in the event of alcoholism following long and wasting diseases. Quite likely the limited fame of tincture of Peruvian bark in inebriety was owing to its efficacy in such cases, and others associated with blood and nerve prostration.

The diet should be such as will not oppress the brain, either through indigestion or other causes. It should be so ordered, also, that it will make no unusual call upon the strength and activity of any of the prominent glandular organs, and especially should this be observed with respect to the liver, for the liver, heart and brain are peculiarly liable to degeneration through the toxic properties of alcohol.

Respecting the *time* required for the successful treatment of inebriety, it manifestly must vary according to circumstances, but it is usually of considerable duration. It is the opinion of Dr. B. W. Richardson that, "in the major form of inebriety," especially when the heart is much affected, "it will require from two to six years of abstinence to ensure a restoration from the disablement that has been developed and sustained into permanent habit of disease."

With regard to the treatment of simple inebriety, before complications have taken place, I will say nothing here, except that the substitution of one form of intoxicant for another—as giving narcotics and hypnotics in the place of alcohol—is not curative. It is, at best, palliative and of temporary effect only.

ART. IV.—Remarks on a Series of One Hundred Laparotomies.

By JOSEPH TABER JOHNSON, A. M., M. D., Ph. D.,

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Ten years ago to-day, I performed my first laparotomy on a lady completely broken down, mentally and physically, on account of menstrual epilepsy. When I heard from her last, she was alive and doing well—not a “brilliant cure in sixteen days,” but so much improved as to induce her to write that she and her family were very glad the operation had been done.

My next case occurred two years later; she also recovered.

My next three cases died. None of them suffered from the four principal causes of death following laparotomy—shock, hæmorrhage, peritonitis, or sepsis. But still, I began at once to study over again my abdominal surgery, and in the hope of doing better work in future, took lessons from the best operators across the ocean, as well as in our own country. I saw Tait perform twenty-three abdominal sections, and am indebted to him for much courtesy and hospitality. I studied the methods of Keith, in Edinburgh, Bantock and Thornton, in London. I had previously seen Sir Spencer Wells operate.

I saw operations under clouds of carbolic spray, and without spray. I saw every detail and variety of antiseptics used, and other operations, equally, if not more successful, where only “surgical cleanliness” was observed. I made many trips to New York, Philadelphia, and Baltimore upon invitation and toleration to study the methods of our most successful abdominal surgeons, in all witnessing and assist-

ing, where I could, in at least two hundred laparotomies for a great variety of conditions.

After this increase of experience with men and methods, I had a run of 25 ovarian operations without a death; the twenty sixth case died. Another run of fourteen cases without a death; the fifteenth died of tetanus the fourteenth day after the operation. Another run of thirty-three cases without a death—making a new series of seventy-three ovarian operations, with seventy-one recoveries and two deaths. The first series of five cases had three deaths.

In this report of 100 consecutive laparotomies, I only propose to discuss, briefly, the value of surgical interference in some of the different groups of cases embraced in the accompanying table. So much has been written upon the technique of abdominal section, that additional words from me upon this much worn subject would seem a work of supererogation.

Laparotomy was done for the—

Removal of uterine appendages,	42	times	with	3	deaths.
Ovarian tumors, - -	37	"		2	"
Uterine fibroids, supra-vaginal					
hysterectomy, - -	12	"		4	"
Cæsarean section, - -	1	"		1	"
Hydro-nephrosis (74 pounds)	1	"		1	"
Exploratory laparotomies, -	3	"		0	"
Universal cancer, . - - -	1	"		1	"
Ruptured tubal pregnancy (sup-					
posed), - - - -	1	"		1	"
Chronic peritonitis, - -	1	"		0	"
Laparotomy for abdominal dropsy,	1	"		0	"
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	100	"		13	"

REMOVAL OF THE APPENDAGES.—Much has been said upon both sides of this subject. There has been so much of brilliant success on one side, and so much of disappointing failure on the other, that this question is not settled upon such firm ground as either ovariectomy or hysterectomy. The failures have been mostly where the operation was per-

formed under a mistaken diagnosis, or for the relief of the hysteroneurosis. The successes mostly occurred when done for the relief of chronic inflammatory disease of the tubes or ovaries connected with collections of pus.

Fewer Battey's and more Tait's operations are being done now than formerly, and yet poor sufferers frequently apply to the surgeon as a last resort. It would appear, on Battey's theory, that the only resource left, in these cases, was to bring about a premature and artificial menopause by the removal of the offending organs. My chief mourners and complainers are among this class of patients. Some few of them are not entirely cured, being still somewhat nervous. Two say they are no better, and wish they had their ovaries back again. I certainly wish I had never seen them. They are both of the non-paying class, and as a rule, they are the worst grumblers.

I find so much to do now-a-days for the relief of the pus cases, about which there is little or no dispute, except as to method, that I am at present giving the "nervous, broken-down wrecks," a wide berth. They certainly need help, but I recommend them to seek our enthusiastic electrical brethren, and only encourage them to come back when "a long and thorough course with this subtle and mysterious agent" has also failed to cure. Among this class, however, I have seen some remarkable cures.

The majority of these operations have been for the removal of collections of "pus in the pelvis." The immediate as well as remote results are in the highest degree satisfactory. Life is often saved, and health is more fully and quickly established than in the neurotic class. Relapses of pain do not occur, when the ovaries and tubes are completely removed, unless from fresh adhesions.

Another class of cases, where the removal of the appendages has proved most eminently satisfactory, is for the relief of growing and bleeding myomata of the uterus. Ergot, curetting, iodine and electricity, sometimes singly or combined, have failed, and resort to this operation to save lives very seriously threatened has seemed imperative.

In every case operated on for this purpose, success has been almost perfect. Hæmorrhage has been arrested in all cases, and the tumors have ceased from troubling, and weary are at rest.

In one case I could not get at the ovaries to remove them and was compelled to perform supra-vaginal hysterectomy. In this case also recovery was complete. Doubt has frequently arisen when one pus tube has been removed, whether a slightly diseased "other ovary," should not be removed at the same time.

I have generally thought it best to remove both. In two cases I was persuaded by physicians present to leave them.

In both these patients the cure only lasted a year, when they became as great sufferers as formerly. They both applied for a second operation, and by it were finally cured.

In one case the facts pointed towards ruptured tubal pregnancy. No foetus was found, but plenty of old blood clots.

The patient had been seven weeks in bed, and was operated on to save life, when the pulse was 130 and temperature 103° F. She died on the second day.

OVARIOTOMY.—In this group, tumors were removed of all sizes, from one pound up to sixty-five, and of all varieties, unilocular and multilocular, colloid and solid; fluids of all colors and consistencies were found, some so thick as to require removal by the hand or ladle; some were part solid and part fluid, some were double tumors on both sides; two had twisted pedicles, some were so broad as to require ligating in three or four divisions; and in two instances in girls under seventeen, tumors weighing 64 and 58 pounds, respectively, the pedicles were no larger than the little finger.

In some of the large tumors the incision was less than three inches long; in others, where there were solid parts and adhesions high up, the incision was a foot long.

In some, there was no soiling of peritoneum by escaping fluids, and in these cases there were no sponges used inside and no drainage tube required. In others, many pitchers

of hot distilled water were used in irrigation and glass drainage tubes left in.

Recovery was the rule in all these cases, as shown in the annexed table.

Difficulties may be expected to increase as the tumors or the patient are advanced in years. Small tumors, as a rule, were associated with fewer adhesions and other complications, and convalescence was more rapid and uncomplicated.

It is quite likely that the changes in the kidneys are from the same cause as in pregnancy—simply pressure and mechanical interference. That more trouble is not caused by pressure is surprising in both conditions. Some other cause evidently combines with pressure, which is not present fortunately in all cases, but my experience leads me to believe that almost the same proportion exists between the cases of albuminuria of pregnancy, and that of abdominal tumors. Let alone, they advance toward a fatal termination in both conditions. The pressure removed by the induction of premature labor in one case, and the early removal of the tumor in the other, puts a sudden end to the albuminuria, and the patient is well.

Increasing experience adds emphasis to the plea for early ovariectomy made by Bantock ten years ago. It is the exception now to meet with very large ovarian tumors. The general practitioner understands that the patient's chances are better in early than in late operations, and that a cure is not affected by tapping them.

I recently lost a patient who had been tapped three times in the same place. The abdominal wall as well as the cyst wall, which was adhered to it, had both become cancerous. I would not have operated but the lady had come a long distance, and was so exhausted by the journey that she was unable to return home. I hoped to get her well enough to go home to die, but her strength failed on the third day after the removal of her sixty-five pound tumor. I believe her life would have been saved, if the operation had been done at the time of the first tapping.

Increasing experience also is a great promoter of dexterity

in manipulation, and skill in completing operations, which a surgeon in his early career would abandon as hopeless and impossible. In no class of surgical cases is experience of greater value than in dealing with abdominal and pelvic operations.

It is an injury to a beginner to have a run of easy uncomplicated cases. He will have his share of the neglected and difficult operations to do in the long run, and if his pathway has been entirely smooth up to the time of his meeting his first bad case, I pity him, and I pity his patient. I feel sure that I could now complete and save some of the cases, which I did not have the knowledge or the courage to thoroughly and completely finish ten years ago.

So many unexpected things are liable to be found when the abdomen is opened, that a man has to be equipped and prepared to do much more than he starts out to do. A simple oöphorectomy for a bleeding myoma has sometimes to be terminated as a hysterectomy in order to arrest hæmorrhage caused by efforts to remove the appendages. Wounds in the bladder and intestines, made unexpectedly while separating adhesions, have to be repaired or the patient will be lost. The cutting or wounding of a ureter requires some very prompt and difficult surgery to save the patient's life. These and other serious complications a tyro may meet in his first or fourth series of twenty-five cases, but he will have to face them ultimately, and his preconceived opinions about the ease and beauty of abdominal surgery are apt to receive a sudden, a sad, and bloody reversal.

In this group of cases there have been 37 operations, with 34 recoveries, and three deaths. These, taken with the removal of the ovaries for various causes, number 79 ovarian operations, with 74 recoveries, and five deaths. Beginning with the sixth case, and ending with the one hundredth, there have been 73 ovarian operations with only two deaths, giving me a mortality in this series of less than 3 per cent.*

* This list of 100 laparotomies does not include all my cases, as I have now done about 30 more in a second series which will be reported later. The next report will include the operations done in Columbia Hospital, many of which were the worst cases a surgeon could meet with—done suddenly with a faint hope of saving life.

SUPRA-VAGINAL HYSTERECTOMY.—In the distressing class of cases in which these operations were done, it is safe to say that all modes of treatment had been tried in vain before the sufferers were willing to come to the *dernier resort*. Electricity had had as fair a trial as other remedies, not always by experts, but in as thorough a manner as was possible under the circumstances. Iodine, muriate of ammonia, ergot and curetting had all been tried, and found wanting. No treatment permanently arrested the growth of the tumors and relieved the pressure symptoms. None of these were ever symptomatically cured, and all preferred hysterectomy with its risks to going on as they were. The fatal cases in this group occurred mostly among the early operations.

The experience gained in abdominal surgery in the other groups of cases, was of the greatest benefit when these large vascular solid tumors were attacked. It is a great mistake to be governed by the belief, so popular in the profession, and to some extent outside of it, that these tumors rarely cause death, or give no trouble after the menopause. While the mortality reports may embrace few deaths attributed directly to fibromata, yet many a woman has lost her life indirectly from this cause. Deaths attributed to kidney diseases, intestinal obstructions, or inflammation, general exhaustion or anæmia have had their origin, and would not have occurred but for the presence of a big fibroid tumor of the uterus. I am now preparing a paper on the "history of uterine fibromata after the menopause," which will present some facts heretofore disbelieved.

Those who oppose hysterectomy must present some better reason than they are now able to do before we will be willing to lay down the knife in obedience to their command. When a series of 38 supra-vaginal hysterectomies can be reported by Keith, with only three deaths, in a class of women who had run the gauntlet of many varieties of treatment, and some of them begging for death to come to rid them of their long suffering; and when Joseph Price can report 57 supra-vaginal hysterectomies with only 3 deaths, it is time that opponents of the radical operation were re-

considering their objections, or looking about for some better and more permanent cure than they are yet able to suggest.

It is not unreasonable to hope that a courageous early operation for the removal of growing fibroids, which do not show a disposition to yield to other treatment after a fair trial, will be followed by results very nearly approaching those of ovariectomy. Most of the difficulties and dangers of supra-vaginal hysterectomy are from the adhesions found from the effects of long-continued pressure. The larger tumors form vascular connection with the omentum, intestines, bladder, and other organs. The risks of cystic and malignant degeneration also increase in ratio somewhat commensurate with the age, size, and rate of growth, so that our views in regard to the benign nature and history of uterine fibromata will be likely to undergo change as they are more thoroughly studied, and as the operations for their removal become more numerous and successful.

The removal of a six to ten pound growing fibroid, where there are yet no adhesions, and the kidneys not crippled from the effects of prolonged pressure, ought to be accomplished by supra-vaginal hysterectomy, with a death-rate scarcely larger than follows ovariectomy. This I have not yet been able to do, but it has been done by a few, and can be done by more operators. Reference is of course made only to the class of fibromata which give rise to symptoms demanding relief. Many women carry these burdens without trouble or complaint, and do not come within the group of cases which are being considered.

The limits prescribed for these "remarks" have, I fear, been overstepped already, and discussion of other interesting cases will have to be omitted.

I cannot forbear saying a word, however, in favor of the more frequent resort to the improved Cæsarian section as an alternate to craniotomy, and also favorable to explanatory incisions in cases of doubtful diagnosis.

TABLE OF ONE HUNDRED LAPAROTOMIES. BY JOSEPH TABER JOINSON, M. D.

No.	Residence.	Medical Attendant.	Age	Married or Single.	Disease.	Operation.	Result.	Date.
1	Sherman-town, Pa.	Dr. Riley.	29	S.	Ovario-epilepsy.	Ovaries and tubes	Recovered.	Aug. 17, 1881.
2	District of Columbia.	Dr. Leach.	22	S.	Chronic inflammation.	Batley's operation.	Recovered.	Oct. 11, 1882.
3	Washington, D. C.	Hor. Father.	21	S.	Cystoma.	Right ovary.	Died.	June 8, 1884.
4	Chicago.	Dr. Curtis.	65	M.	Cystoma.	Right ovary.	Died.	Nov. 12, 1884.
5	Pargo Dak.	J. T. J.	40	M.	Chronic inflammation.	Ovaries and tubes.	Recovered.	Jan. 20, 1885.
6	Buffalo, N. Y.	Dr. Bromwell.	29	M.	Chronic inflammation.	Right ovary.	Recovered.	Feb. 20, 1885.
7	Washington, D. C.	Dr. Leach.	24	S.	Chronic inflammation.	Ovaries and tubes.	Recovered.	Feb. 21, 1885.
8	Falls Church, Va.	Dr. Walter.	28	M.	Malignant fibro-cyst of uterus	Supra-vaginal hysterectomy.	Recovered.	Oct. 5, 1885.
9	Washington, D. C.	Dr. Gott.	23	M.	Cystoma.	Right ovary.	Recovered.	Oct. 12, 1885.
10	Washington, D. C.	Dr. Leach.	21	S.	Five years of persistent pain.	Ovaries and tubes.	Recovered.	Nov. 1, 1885.
11	Washington, D. C.	Dr. Lincoln.	32	M.	Parovarian cyst.	Left ovary.	Recovered.	April 21, 1886.
12	Washington, D. C.	Dr. Cate.	36	M.	Cystoma.	Both ovaries.	Recovered.	May 27, 1886.
13	Potomac, Md.	Dr. Kleinschmidt.	19	S.	Hystero-epilepsy.	Ovaries and tubes.	Recovered.	Oct. 23, 1886.
14	Washington, D. C.	Dr. B. B. Adams.	31	S.	Parovarian cyst.	Left ovary.	Recovered.	Nov. 17, 1886.
15	Washington, D. C.	Dr. Rayne.	24	M.	Ovario-epilepsy.	Ovaries and tubes.	Recovered.	Nov. 24, 1886.
16	Washington, D. C.	Dr. B. B. Adams.	50	M.	Cystoma; twisted pedicle.	Both ovaries.	Recovered.	Feb. 14, 1887.
17	Washington, D. C.	Dr. Leach.	27	S.	Dermoid cyst.	Both ovaries.	Recovered.	Feb. 21, 1887.
18	Washington, D. C.	Dr. Fraunzi.	32	M.	Bleeding myoma	Ovaries and tubes.	Recovered.	March 7, 1887.
19	Washington, D. C.	J. T. J.	26	S.	Chronic inflammation.	Ovaries and tubes.	Recovered.	April 27, 1887.
20	Columbia, Va.	Providence Hospital.	40	S.	Bleeding myoma.	Died of abscess 10th day.	Died.	May 1, 1887.
21	Washington, D. C.	Dr. Rayne.	35	M.	Carcenar section.	Ovaries and tubes.	Recovered.	June 15, 1887.
22	Washington, D. C.	Dr. Little.	22	S.	Chronic inflammation.	Supra-vaginal hysterectomy.	Died.	June 20, 1887.
23	Dayton, Va.	Dr. Andrews.	38	S.	Two large fibroids.	Ovaries and tubes.	Recovered.	June 28, 1887.
24	Madison, Wis.	J. T. J.	23	S.	Infundibular uterus, 65 lbs.	Left ovary.	Recovered.	Oct. 7, 1887.
25	Washington, D. C.	Dr. Hazen.	20	M.	Dermoid cyst, 65 lbs.	Ovaries and tubes.	Recovered.	Oct. 14, 1887.
26	Washington, D. C.	Dr. Leach.	26	S.	Chronic inflammation.	Ovaries and tubes.	Recovered.	Oct. 27, 1887.
27	Hill-boro, Va.	Dr. Taylor.	30	S.	Cystoma.	Left ovary.	Recovered.	Oct. 14, 1887.
28	Washington, D. C.	Dr. Quackenbush.	51	M.	Double ovariotomy and myoma, 54 lbs.	Both ovaries.	Recovered.	Nov. 21, 1887.
29	Washington, D. C.	Dr. Leach.	32	M.	Cystoma.	Right ovary.	Recovered.	Nov. 21, 1887.
30	Washington, D. C.	Dr. Frederick.	67	M.	Ovarian cyst.	Tail's operation.	Recovered.	Nov. 21, 1887.
31	Washington, D. C.	Dr. Hughes.	17	S.	Chronic inflammation.	Tail's operation.	Recovered.	Nov. 21, 1887.
32	Washington, D. C.	Dr. Wells.	15	S.	Cystoma.	Ovariotomy.	Recovered.	Nov. 21, 1887.
33	Washington, D. C.	Dr. Sale.	30	S.	Double ovariotomy and myoma, 54 lbs.	Ovariotomy.	Recovered.	Nov. 21, 1887.
34	District of Columbia.	J. T. J.	30	S.	Chronic inflammation, left ovary.	Supra-vaginal hysterectomy	Recovered.	Nov. 21, 1887.
35	Stanton, Va.	Dr. J. W. Bayne.	34	S.	Large uterine myoma.	Supra-vaginal hysterectomy	Died.	Nov. 21, 1887.
36	Stanton, Va.	Insane Asylum, 4 yrs.	30	S.	Nymphomania.	Tail's operation.	Died.	Nov. 21, 1887.
37	Laurel, Md.	Dr. Stonestreet.	27	M.	Multiple fibroid of the uterus.	Supra-vaginal hysterectomy.	Recovered.	Nov. 21, 1887.
38	Providence Hospital.	Dr. H. L. E. Johnson.	34	M.	Cancer, universal.	Laparotomy. Removed small mass of something.	Died.	Nov. 17, 1888.
39	District of Columbia	Dr. Dunn.	50	M.	Cancer, universal	Exploratory laparotomy.	Recovered.	Nov. 30, 1888.
40	North Carolina.	Dr. Peet.	38	M.	Bleeding myoma.	Tail's operation.	Recovered.	Jan. 2, 1889.
41	District of Columbia.	Dr. Kleinschmidt.	32	M.	Ovarian cyst.	Ovariotomy.	Recovered.	Jan. 4, 1889.
42	District of Columbia.	Dr. Schausen.	42	S.	Very large fibroids.	Supra-vaginal hysterectomy	Died.	Jan. 15, 1888.
43	District of Columbia.	J. T. J.	20	M.	Ovarian cyst.	Ovariotomy.	Recovered.	Jan. 22, 1889.
44	Georgetown, D. C.	Dr. Leach.	29	S.	Uterine fibroid, weighing 20 lbs.	Supra-vaginal hysterectomy	Recovered.	May 12, 1889.
45	Alexandria, Va.	Dr. Brown.	50	S.	Hydro-nephrosis; tumor 74 lbs.	Removal.	Died.	May 10, 1889.
	District of Columbia.	Dr. Mary Parsons.	27	S.	Chronic inflammation.	Tail's operation.	Recovered.	Dec. 16, 1889.

TABLE OF ONE HUNDRED LAPAROTOMIES—Continued.

No.	Residence.	Medical Attendant.	Age	Married or Single.	Disease.	Operation.	Result.	Date.
46	District of Columbia.	J. T. J.	29	S.	Chronic inflammation.	Tait's operation.	Recovered.	Dec. 24, 1889.
47	District of Columbia.	Dr. Bayne.	27	M.	Pyo-salpinx and ovarian abscess.	Tait's operation.	Recovered.	March 14, 1888.
48	District of Columbia.	J. T. J.	28	M.	Chronic inflammation, ovaries and tubes and small myoma.	Tait's operation.	Recovered.	Feb. 11, 1888.
49	Lanham's, Md.	Her Father.	36	M.	Ovarian cyst.	Tait's operation.	Recovered.	May 10, 1888.
50	District of Columbia.	Dr. Walsh.	24	M.	Ovarian cyst.	Ovariectomy.	Recovered.	June 10, 1888.
51	District of Columbia.	Dr. J. Y. Young.	30	S.	Chronic ovaritis.	Tait's operation.	Recovered.	May 15, 1888.
52	District of Columbia.	Dr. Muncaster.	26	S.	Bleeding morosa.	Tait's operation.	Recovered.	June 1, 1888.
53	District of Columbia.	J. T. J.	25	S.	Bleeding myoma.	Tait's operation.	Recovered.	June 25, 1888.
54	Sedalia, Mo.	Dr. Muncaster.	28	S.	Chronic Salpingitis.	Tait's operation.	Recovered.	Sept. 14, 1888.
55	Anacostia, D. C.	Dr. Harrison.	43	M.	Ovarian abscess.	Tait's operation.	Recovered.	Oct. 29, 1888.
56	District of Columbia.	Dr. Lincoln.	43	M.	Sarcoma ovary.	Ovariectomy (tetanus).	Died.	Dec. 20, 1888.
57	District of Columbia.	Dr. Bayne.	25	S.	Ovarian cyst filled with pus.	Ovariectomy.	Recovered.	Jan. 20, 1889.
58	Glymont, Md.	Dr. Chapman.	19	S.	Ovarian cyst.	Abdominal section and drainage.	Recovered.	March 5, 1889.
59	Shepherd Station.	Dr. Fyles.	26	M.	Tumor in abdominal wall, extending into abdomen.	Tait's operation.	Recovered.	April 15, 1889.
60	Richmond, Va.	Dr. Sprigg.	24	S.	Chronic salpingitis and ovaritis, and incurable reflex vomiting.	Ovariectomy.	Recovered.	April 15, 1889.
61	Frederick Co., Md.	Dr. Fry.	28	M.	Ovarian abscess.	Ovariectomy.	Recovered.	May 15, 1889.
62	New York City.	Dr. Gardner.	61	M.	Ovarian cyst.	Ovariectomy.	Recovered.	June 1, 1889.
63	District of Columbia.	Dr. Corey.	29	M.	Cancer of ovary.	Ovariectomy.	Recovered.	May 25, 1889.
64	District of Columbia.	Dr. Coker.	61	M.	Ovarian cyst.	Ovariectomy.	Recovered.	April 6, 1889.
65	District of Columbia.	J. T. J.	36	M.	Ovarian cyst.	Ovariectomy.	Recovered.	Sept. 9, 1889.
66	Hampton, Va.	Dr. Lincoln.	68	M.	Ovarian cyst, 64 lbs.	Tait's operation.	Recovered.	May 10, 1889.
67	District of Columbia.	Dr. Roberts.	27	M.	Bleeding myoma.	Ovariectomy.	Recovered.	May 3, 1889.
68	District of Columbia.	Dr. Brownell.	27	M.	Very painful, but small, solid, ovarian tumor.	Ovariectomy.	Recovered.	June 12, 1889.
69	District of Columbia.	Dr. Brownell.	28	S.	Obstruction of the bowels, supposed to be due to a four-pound uterine fibroid, filling the pelvis. Supravaginal hysterectomy. Diet six days later. Obstruction not relieved. Autopsy revealed cancer in the transverse and descending colon, and perforation of intestine. No inflammation or sepsis resulting from operation.		Died.	
70	Sutland, D. C.	Drs. Bayne & Pyles.	18	M.	Supposed to be extra uterine pregnancy, ruptured into folds of broad ligament. Had been seven weeks in bed, and getting rapidly worse. Pulse 130; temperature 103° in P. M. For three last days, chills and irregular sweats. Operated to save life. Tumor size of child's head, filled with black blood clots. Irrigated and drained. Died second day.		Died.	June 17, 1889.

71	Washington, D. C.	Dr. Hamilton.	20	S.	Ovarian and tubal abscess.	Ovariectomy.	Recovered.	Oct. 1, 1889.
72	Hyattsville, Md.	Dr. Wells.	19	S.	Chronic inflammation.	Tai's operation.	R covered.	Oct 20 1889.
73	Washington, D. C.	J. T. J.	34	S.	Large uterine myoma.	Supra-vaginal hysterectomy.	R covered.	Dec. 12, 1889.
74	Baltimore, Md.	Dr. Wales.	43	S.	Ovarian cyst.	Ovariectomy.	Recovered.	Jan. 6, 1890.
75	Toledo, O.	Her family physician	23	M.	Chronic inflammation.	Tai's operation. Right ovary and adhesions.	Recovered.	Feb. 10, 1890.
76	Boston.	Drs. Barker & Folsom	42	S.	Chronic inflammation and incurable nervous troubles.	Tai's Operation. Both ovaries and tubes.		Feb. 17, 1890.
77	Buckhannon, W. Va.	Dr. J. P. Miller.	19	S.	Menstrual insanity.	Ovaries and tubes.	Recovered.	April 21, 1890.
78	Buckhannon, W. Va.	Dr. J. P. Miller.	29	S.	Large ovarian tumor.	Ovariectomy.	Recovered.	April 21, 1890.
79	Virginia.	Dr. N. S. Lincoln.	32	S.	Malignant fibro-cyst of uterus.	Exploratory incision, 30 joints of fluid.	Recovered.	May 7, 1890.
80	Washington, D. C.	J. T. J.	21	S.	Chronic inflammation with adhesions	Right ovary and tubes.	Recovered.	May 12, 1890.
81	Virginia.	Providence Hospital,	50	M.	Bleeding myoma.	Ovaries and tubes.	Recovered.	May 10, 1890.
82	Washington, D. C.	Dr. Chew.	30	S.	Chronic peritonitis.	Laparotomy, separation of many adhesions, abdomen left full of distilled water.	Recovered.	May 13, 1890.
83	Bristol, Tenn.	J. T. J.	24	M.	Chronic inflammation with adhesions	Right ovary and tube.	Recovered.	May 17, 1890.
84	Middleburg, Va.	Dr. Luck.	40	M.	Ovarian tumor.	Ovariectomy.	Recovered.	Oct 20, 1890.
85	Washington, D. C.	Dr. Custis.	40	M.	Bleeding myoma.	Ovaries and tubes.	Recovered.	May 20, 1890.
86	Brookville, Md.	Dr. Magruder.	49	M.	Strangulated umbilical hernia, with large uterine myoma.	Radical cure and supra-vaginal hysterectomy.	Recovered.	May 24, 1890.
87	Washington, D. C.	Dr. D. W. Prentiss.	26	S.	Uterine myoma.	Myomectomy (laparotomy).	Recovered.	June 2, 1890.
88	Rochester, N. Y.	Dr. White.	23	S.	Chronic inflammation.	Ovaries and tubes.	Recovered.	March 20, 1890.
89	Georgetown, D. C.	Drs. Mackell & Busby	28	M.	Cervic ovaries	Ovaries and tubes.	Recovered.	Sept. 26, 1890.
90	Washington, D. C.	J. T. J.	36	M.	Large uterine myoma	Supra vaginal hysterectomy.	Recovered.	Oct. 1, 1890.
91	Washington, D. C.	Dr. Roberts.	30	M.	Abdominal dropsy.	Laparotomy, irrigation, drainages.	Recovered.	Nov. 3, 1890.
92	Catharpin, Va.	Dr. Brower.	35	M.	Two ovarian tumors.	Double ovariectomy.	Recovered.	Nov. 7, 1890.
93	Washington, D. C.	J. T. J.	26	S.	Chronic inflammation with adhesions.	Right ovary and tube.	Recovered.	Dec. 18, 1890.
94	Washington, D. C.	J. T. J.	40	M.	Uterine myoma and large pus tubes.	Ovaries and tubes.	Recovered.	Dec. 27, 1890.
95	Washington, D. C.	Dr. S. S. Adams.	30	M.	Soft myoma.	Ovaries and tubes.	Recovered.	Jan. 26, 1891.
96	Washington, D. C.	Dr. Swornstedt.	25	S.	Chronic inflammation.	Supra-vaginal hysterectomy.	Recovered.	Jan. 31, 1891.
97	Tenallytown, D. C.	Dr. Slaymaker.	22	S.	Chronic inflammation.	Ovaries and tubes.	Recovered.	Feb. 17, 1891.
98	Baltimore, Md.	J. T. J.	23	M.	Chronic inflammation.	Ovaries and tubes.	Recovered.	March 13, 1891.
99	Rockville, Md.	Dr. Wootton.	41	M.	Ovarian tumor.	Ovariectomy.	Recovered.	March 20, 1891.
100	Washington, D. C.	J. T. J.	40	M.	Ovarian tumor.	Ovariectomy.	Recovered.	April 1, 1891.

ART V.—Tubercular Peritonitis.*

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One of the good results following the development of abdominal surgery is the treatment of tubercular peritonitis. All of us call to mind our early knowledge of this disease, how helpless we seemed in the presence of a patient where once this diagnosis had been made.

Again, notwithstanding all our pathological studies given to the subject, holding autopsy after autopsy, yet nothing in the line of a curative treatment was evolved.

The line of treatment that now offers so much encouragement has had a peculiar ushering in. The attention of the profession seems first to have been called to this method by Sir Spencer Wells, who, in 1862, in operating for what he believed to be an ovarian tumor, found a condition of encysted peritoneal effusion—the peritoneum being studded with tubercles. He simply emptied the cavity of the peritoneum of its fluid, and was surprised to have his patient recover.

Abdominal section for the relief of tubercular peritonitis seems to have had its conception, as it were, by chance, but it was not long in receiving the endorsement of the profession. I remember to have listened with much astonishment and earnestness to Mr. Tait in 1884, when, in operating on a case of this kind he said, "By simple incision and drainage, I have seen these cases get well."

As in all surgical conditions, much has been gained by careful comparisons of early investigators—their views as to pathology, and, what is of so great importance to the practical surgeon, operative procedure.

In this brief paper it is not my intention to enter much the field of pathology. Since the discovery of the tubercle

*This paper was prepared for the meeting of the Medical Society of Virginia, Session of October, 1891, but the author found it impossible to attend, and therefore contributed it to this journal.

bacillus, the pathology of tuberculosis has become exceedingly simple.

But why the therapeutic value of so simple a surgical procedure should be so great, is far from being satisfactorily solved. Of this, and the most approved method of treating these cases at the present time, I desire to speak later. I wish to report the following cases, which are far from ideal ones, and then to draw some conclusions as to the necessity of early and prompt diagnosis. For, after all, if these cases are to be a success by the treatment of peritoneal incision, the rate of mortality will be far less if they are reached early and before the tubercular diathesis has become established. By this I mean that the tubercular bacilli must be confined to the peritoneum, and not already infiltrated into other organs.

CASE I.—Miss E. B., æt. 18, admitted to Albany Hospital November 17, 1886; discharged December 1, 1886, improved. Patient says that she has always been healthy until last April, when she noticed an enlargement of the abdomen. Had some pain in back of dull heavy character; lost appetite, but bowels were regular. No trouble passing urine. Menstruated at fourteen, and has been regular ever since, except one time the past summer when she went two months over her time. Last two periods have been regular. Tumor seemed to enlarge for a time, and then diminish, but for the last two months increased very rapidly. Abdominal section was performed Nov. 18, 1886, believing the case to be a par-ovarian cyst. The abdominal cavity was completely filled with an ascitic fluid, the left ovary, the omentum and peritoneum were covered with tubercular points or cones. Her mother died of phthisis while patient was in the hospital. After thorough exploration of abdominal cavity, with my hand, the incision was closed, and patient recovered rapidly. She was not told as to no tumor having been removed until six months later, when she was greatly surprised. There was no return of the dropsy, and for two years she continued in excellent health in every respect. Later, I was told that in an adjoining city, she died of abscess within the abdomen. Although making earnest efforts, I have been unable to learn the diagnosis in her last illness.

CASE II.—Miss M. L., æt. 10, admitted to Albany Hospital February 3d, 1887. Diagnosis, general tuberculosis.

Patient always well and strong until August, 1886, when lower part of abdomen began to enlarge. Enlargement slowly increased upward until respiration was embarrassed and heart's action disturbed. When admitted, circumference of body at lower end of sternum was thirty inches, and at umbilicus thirty-one inches. Family, history consumption.

Physical examination showed symmetrical enlargement of abdomen, dullness on percussion and well-marked fluctuation. It was thought best to aspirate for comfort of the patient and to clear up diagnosis. Three pounds of pale, straw-colored fluid was drawn off, alkaline in reaction and albuminous, solidifying on boiling. This treatment gave her much comfort. February 17th, an exploratory incision was made. Abdominal section was done, and nine and three-fourths pounds of fluid (as above) was removed. Peritoneum and mesentery were studded with tubercular masses. It was thought best to close wound, which was done without drainage. Patient rallied nicely. Bowels moved on fourth day after operation; temperature oscillated between 98 and 101 $\frac{1}{2}$ ° for six days when it was normal for three days, wound having healed with stitch abscesses. All symptoms seemed pointing towards a rapid recovery when tubercular pneumonia developed, and she died on tenth day after operation. Post-mortem showed tuberculosis of lungs extensive; also of peritoneum.

CASE III.—Miss M. G., æt. 18, native of United States, and by occupation a housewife. Entered Albany Hospital June 17th, 1890. Had had pneumonia, and was still confined to bed when she came in. Prominent symptoms were hacking cough and dyspnœa, and intense pain in lungs. Patient remained in hospital for seven weeks, and left feeling ill and weak. Soon after, abdomen began to enlarge, for which she consulted a physician and obtained some relief. Again entered hospital September 4, 1890—enlargement of abdomen returning.

Diagnosis—general tuberculosis, abdominal fullness due to tubercular peritonitis. She was tapped October 19th, November 1st and 13th, and December 17th—each time about twenty-four ounces of fluid being removed. On examination, fluid faintly yellow and curdy; no pus; no tubercle bacilli. Owing to her great weakness, her medicines consisted largely of spirits of ammonia and tincture of digitalis. Changed September 8th to muriate of ammonia, etc., and September 15th added morphia in consequence of

her severe cough. December 26th, laparotomy was performed, and drainage tube introduced. In consequence of severe pain of pleurisy, drainage tube was removed on the fourth day; wound granulated from below. The peritoneum was found studded with tubercular masses, confirmed by microscopical examination.

On second day had a severe attack of pleurodynia; right pleura filled with fluid, probably the result of an old pleurisy.

January 17th, abdomen having again filled, old wound was re-opened by incision and abdomen washed out; drainage tube re-introduced. Patient was very comfortable for a few days, but gradually failed in strength, and died January 23rd, 1891. No autopsy.

CASE IV.—Miss G. M., æt. 20, native of United States. Family history good, with one exception, that of an uncle, who is supposed to have died of phthisis. Personal health good up to two years ago, when patient had an attack of anæmia, but recovered almost wholly from this. First menstruated at the age of twelve; advent always painful, but regular. Noted an enlargement of abdomen, which felt hard, about one year ago. Enlargement at first slow; soon became more rapid, and during last two months exceedingly so. General health remained fair.

Diagnosis—tubercular peritonitis. Physical examination revealed abdomen enlarged; no solid mass; uterus normal in size; movable; left ovary enlarged. Urine normal in quantity and constituents. Appetite exceedingly good; digestion unimpaired. No pulmonary lesions; heart normal in action; no symptoms of nervous derangement. Operation at Albany Hospital January 14th, 1891. Usual incision for oöphorectomy, accompanied with profuse discharge of fluid. Peritoneum studded with what, under microscope, proved to be tubercles. Left ovary enlarged, cystic, and studded with tubercles. Ovary removed, wound closed, and glass drainage tube used. Glass tube removed January 27, rubber substituted. At the end of a week, tract expelled drainage tube, and it could not be re-inserted. Gauze iodoform packing then used. Patient made a speedy and uneventful recovery.

There was no ascites, and she was discharged February 25th, fistula almost closed.

For five months following the operation; this patient was troubled with a continuous diarrhœa, apparently catarrhal in its character, which seemed to yield to the use of salol

and bismuth, and the continuous use of iron. Her menstruation was regular, greatly improved in character, becoming somewhat more free, and in July, August, and September, was the most natural she had ever had. She had gained in flesh, has a good color, and feels stronger now, September 6th, than she has for two years. She looks well. Physical bi-manual examination shows a slight enlargement on the left side of the uterus in the neighborhood of what would seem to be the stump of the broad ligament.

From these, it will be gathered that Nos. 1 and 4 were typical cases of the disease; that the treatment and result were all that could be expected or desired. Cases 2 and 3 were undoubtedly general tuberculosis, and too far advanced to recover from any form of therapeutics. They also illustrate the danger there is, in operating in these cases, of developing that formidable complication, tubercular pneumonia or inflammatory phthisis. Such results have been observed by other operators; and I would say here, that in such cases as we suspect or know tubercular deposits to be present in the lungs, that a simple peritoneal incision without drainage is all that we ought to undertake at first; that it should be done under cocaine, and not an anæsthetic. The washing out with hot water of the peritoneal cavity is not so very painful, and the patient will bear it.

The consensus of opinion, I take it to be, is this: That in the pathology of tubercular peritonitis we are far from a satisfactory understanding. Cabot, in his report of cases, refers to the pathology which has been advanced by Hirschfield, and which is exceedingly meagre, but undoubtedly of value. There can be no doubt that the nidus or bed for the development of tuberculosis in the lungs and from the peritoneum present very different conditions. One would suppose that the former gives a much greater opportunity for the bacilli to increase and invade the tissues than in that of the peritoneum. In the latter, the tubercles form from the surface from which they project. They are in contact with the healthy tissues on but one side. They are bathed in the serum which favors rather than hinders their growth. They often become pedunculated and hang off

into the serum, almost detaching themselves from the membranes from which they originate.

Is it not possible, in our explorations of the peritoneal cavity, in these cases of tubercular peritonitis, that we detach sufficient of the tubercular tissues, and by continuous washing and drainage eventually do that which has been aimed at by Koch, and spoken of by Keetley, as "Conceivable that the human being or other animal may cultivate and attenuate a protective bacillus in his own peritoneal cavity, and profit by the culture himself?"

Undoubtedly there have been many cases of tubercular peritonitis which were not strictly such in their character, and still it may not always be easy for us to determine before as to the presence of tubercles. Tapping has certainly failed in removing fluid in which bacilli were to be found, and yet they were present in operating afterwards. There can be no doubt that in primary tubercular peritonitis, abdominal section and drainage is the proper line of treatment, but that we should classify our cases with great care, and, when making a diagnosis, a careful bacteriological examination should be made, so that cases of simple lymphoma of the peritoneum are to be excluded. In general tuberculosis, where other organs are implicated, where the inguinal glands show evidence of lymphatic infiltration, or if there is evidence of tubercular enteritis, then the operation can only be, of necessity, palliative in its results.

We must, in the study of these cases, keep constantly in mind, such as occur particularly among children, and who, for some reason, recover without operation. I have now under observation two cases, one a girl aged eight, and a boy aged twelve years, whom I have seen with their family physicians at different times during the year, and upon each of whom I advised exploratory incision for relief of what certainly seemed to be a condition of tubercular peritonitis. The operation was declined by their parents, and yet for the past two months there is certainly an improvement taking place in the little ones. They have ascitic fluid, have no constitutional symptoms, but seem rather to be growing

less in size and more in their general strength. It is not possible that the mere fact of doing an operation can have its effect upon the patient in the way of a mental impression that tends to the cure of tubercular peritonitis. White, in his very able article upon the supposed curative effect of operation, *per se*, in reference to tubercular peritonitis, says: "Finally, as to the rationale of the cure of tuberculosis of the peritoneum:—Peritoneal tuberculosis is dependent upon extension of tubercular inflammation from adjacent organs, or to direct infection by means of bacilli circulating with the blood. Phillips' pathological studies showed that of 107 cases of tubercular peritonitis, the lungs were involved in 99, the pleura also in 60, and the bowel in 80. The frequency of intestinal invasion by tubercle is well known. The serosa becomes quickly involved, but this involvement may remain strictly localized, and may undergo spontaneous resolution, if the original source of infection, the intestinal lesion, cicatrizes, as autopsy findings show that it frequently does. When, however, the peritoneal involvement comes from a large organ and is extensive, it is as difficult to conceive the rationale of spontaneous resolution as it is to explain in what way operative procedure, except absolute ablation of the disease, can possibly be of the slightest avail. Yet the fact remains, that a gratifying percentage of success follows simple opening and intra-abdominal manipulations in cases of tubercular peritonitis."

As to treatment, simple incision seems to have been attended with better results than the more elaborate application of the various germicides. In fact, the statistics thus far are in favor, where no disinfectants or germicides were used. As to the use of iodoform, in solution or otherwise, there is yet certainly a wide difference of opinion. When we consider the success given by Koeing of 140 cases in Germany, with 131 recoveries, we are strongly impressed with the belief that the treatment there mentioned is certainly the simplest, if not the best. This method consists of flushing or injecting into the peritoneal cavity hot water, followed by continuous drainage.

In a recent article on the subject in the report of three cases (*Archives of Pediatrics*, Vol. VIII, p. 717,) Dr. Keetley remarks, that "he does not consider the relationship of cause and effect between operation and the cure to be proven yet. We have no sufficient standard of comparison by means of which we can compare the operated with the non-operated; and also those we have, are open to the objections which lessen the value of all heterogenous collections culled from the journals." To take away dropsical fluid, may be to strike a blow—to let in air and light; even mechanical disturbances of the tubercles by the passage of the operator's finger over them, or by flooding them with water, and even by the action of opposing surfaces rubbing against each other, when the peritoneal cavity has been deprived of fluid, and adhesions separated, may be injurious to the vitality of the bacilli, although it is generally regarded as favorable to infection."

We must distinguish between infection and culture. The conditions favorable to one, may not be so to the other. Moreover, the mere fact of being inoculated with a bacillus may be a protection to the sufferer against the ravages of the inoculated organism.

One looks in vain through the medical journals for the successful treatment of these cases by means of Koch's lymph, and yet it seems to be a very good opportunity for the employment of tuberculin, were it the treatment for tuberculosis.

Antikamnia for Frontal Headache of Influenza.

In a paper read before Stark Co. Academy of Medicine, September 1st, Dr. D. S. Gardner, of Massillon, Ohio, says he uses Antikamnia, in five or six-grain doses, repeated once in an hour or two, with the happiest results in the excruciating headache of influenza. He regards it almost a specific in this form of pain.

ART. VI.—An Appeal for More Thorough Antisepsis in Midwifery.

By W. H. RIBBLE, Jr., M. D., of Wytheville, Va.

There is no general practitioner upon whom the subject of midwifery does not have a practical bearing. We are all called to the bedside of parturient women, and to all of us should come the question, *Your duty there?*

Volumes have been written on this subject, the best of which we all, no doubt, have within arms-length of our office chair; but in none of them do I find the application of, and necessity for *antiseptics* so clearly laid down as to impress the busy reader with the importance due the subject. And I know of many of our busiest and most active fellows, who never think of antiseptics in connection with midwifery till they have a patient at death's door with some form of pelvic inflammation and its hazardous results. Then, after all internal medication and external irritants have failed, they will, as a dying man grasps a straw, vaguely and imperfectly resort to antiseptics. But alas! too late, the foe has gotten beyond their reach; and even if life is saved, the woman is left with some form of pelvic disease which will almost certainly carry her to an invalid's grave *via* the rough and tortuous road of gynæcology, or bring her under the laparotomist's knife.

We read, "let nature do her work." Would to God she could! It is sacrilege to say that the average case of labor of to-day is the work of nature. Where will we find a woman with nature's perfect form, and perfect organs with perfect functions? Society and disease have so perverted woman's nature that science must come and guard her—ever changing from nature's changeless laws.

Nature made the womb and its adjuncts a perfect automatic aseptic incubator of babes; and while the babe developed, the means of its delivery with *safety* to its mother also developed.

Nature's forceps is in the uterine and abdominal walls (*vis a tergo*.) Her dilator, is "the bag of waters" (a power

from within.) The vagina is her drainage tube, with the labiæ—a double valve—arranged to allow free escape of anything from within, but to close against the entrance of foreign matter.

But, in our society woman, the *vis a tergo* must often be reinforced by forceps, the “bag of waters,” by sponge tents or Barnes’ dilators; and she is supposed to be so weakened by labor, that she must stay in bed for ten days. This latter necessity turns nature’s aseptic drainage tube (which has been almost certainly rendered septic by fingers or instruments, or something else a few days previous to labor) bottom upwards, and converts it into a septic reservoir, holding decomposing animal substances in contact with probable cervical or vaginal abrasions, and giving them every opportunity to enter the patulous os uteri, and start ptomaines and swarms of bacteria up the open mouths of vessels in the denuded placental site.

In the lower classes, syphilis and gonorrhœa, filth and exposure are superadded; and it seems a wonder that nature’s scavengers (bacteria), do not serve them even worse than they do. As it is, in nearly all of them, we find the ashes of their work in the form of leucorrhœa, ulcerated and abraded crevices, pelvic abscesses, adhesions, and inductions!

Of peri-uterine inflammation, Dr. Goodell says (*Lessons in Gynæcology*, 3rd edition, p. 252.) “The bruises and other lesions of *natural* labor will sometimes kindle up these inflammations, but very rarely if antiseptic midwifery has been scrupulously resorted to”—clearly indicating that it is not the *lesion* which kindles the inflammation, but sepsis which kindles in the lesion. Antiseptic midwifery does not remove lesions; it removes sepsis, till nature prepares the epithelium, her shield against her scavengers.

Again, Dr. Goodell says (*Idem*, p. 131), “When, however, it (endometritis) is septic in character, its course is a very rapid one; and the walls of the womb, the ovaries and peritoneum, are soon implicated. * * * Whenever possible, the uterine cavity is to be washed out, twice daily, by

injection of two per cent. solution of carbolic acid. Would not scrupulous antiseptic midwifery prevent the septic endometritis in puerperal cases? And would not these injections do more good if used before the septic processes has commenced and spread to the "walls of the womb, ovaries, and peritoneum," out of reach of antiseptics?

"Acute puerperal endometritis, is usually septic in character," says Dr. C. D. Palmer (*Amer. System of Gynæcology*, Vol. I, p. 543). It is not always so; and would not universal antiseptic midwifery wipe it out?

Dr. W. G. Wylie, in his excellent article on salpingitis (*Amer. System of Gynæcology*, Vol. II, p. 913), testifies: "It is probable that unless the tubes have been *enlarged by pregnancy*, endometritis is not liable to extend to the mucous lining of the Fallopian tubes. On a careful study of my cases operated upon, now numbering 130, only about 10 per cent. could claim to be virgins, and in a great majority the salpingitis could be *plainly* traced to *septic* endometritis following *abortion or labor*."

Yes, the more we study gynæcology, the more we are convinced, that small would be its field of work, and few its operations, if the septic process "following abortions and labor," were done away with. Even that 10 per cent., which claimed to be virgins, might, if they traced back their family history, find that they had a predisposition to their trouble by reason of weak organs, handed down to them through generations of infected mothers.

Think of the extent to which this principle of asepsis and antiseptics is carried in our every day life. If our meat is to be kept, it is salted; twenty-four hours would render it poisonous if kept at the temperature of the blood in the vagina. In canning and preserving fruits and vegetables, heat is used as an antiseptic, and to maintain their aseptic condition, they are hermetically sealed. When fruit is stored away, we are careful to pick all that is burned or decaying. Yes, infection is guarded against by the ignorant cook, the farmer, the butcher, the housekeeper, and by the dumb brutes themselves, for they lick the blood from

their own wounds, as if even they knew it to be a soil for the development of poison.

Instinct, experience, science, and reason, all teach us that devitalized organic matter immediately commences the process to decomposition, and that during this process, *poisons are formed*. Why then should any of us have the genital canal uncleansed after labor?

A perfectly aseptic labor can hardly be obtained. We may render our hands aseptic, but unless we can likewise treat the bed-clothes and the patient herself, our hands may be infected therefrom; and, in fact, the vagina is frequently septic before labor commences.

On August 5th, I saw the wife of a neighboring farmer, who, a week previous to my visit, gave birth without an attendant. She had septic fever, and her child had ophthalmia neonatorum. She gave a history of a vaginal discharge prior to labor, which was evidently septic and gave rise to her own trouble and that of her child. She died, and I firmly believe that had she used two or three antiseptic douches prior to labor, and as many afterwards, she would now be a well and happy mother, and her child would have escaped its sore eyes.

This case has had the effect of making me direct the use of a bichloride of mercury douche, just prior to labor in all cases where I suspect any vaginal infection. And I do not feel that I have done my duty, in any case, unless I leave half a dozen antiseptic tablets with directions for a douche every day for at least the first three.

If forceps or the hand have entered the uterus, I invariably follow them with a hot douche of 2 per cent. carbolic acid. It cleanses the cavity and stimulates the uterus to contract. Since these strict precautions have been observed, every case has had a rapid and uneventful recovery; when I did not use them, I have had infection and death.

Many practitioners object to these douches on the grounds that they worry and weaken the patients, and they generally get well without them. All patients must use the bed-pan or some substitute, and if the douche be used at the same time, it will be little, if any annoyance to them. And,

though most patients apparently recover without them, we should remember the testimony of gynæcologists, that the greater majority of patients coming under their care, trace their trouble back to septic infection following an abortion or a labor. And when we are called to attend such cases, let us go armed against this enemy which is lurking in every parturient bed, as does the green fly haunt the butcher pen.

ART. VII.—*Morbus Occultus Ossium* (?)—A Unique Case.*

By BENJAMIN F. BELL, M. D., of Parrattsville, Tenn.

I ask the liberty to report the following very novel and interesting case of osseous disease:

In 1870, Miss Sarah Ness, a resident of Greene county, Tenn., aged 50 years, called at my office, complaining of severe pain of the index finger of left hand. The finger was not enlarged, indurated, or changed from normal temperature. The pain was not attributable to any known cause. I prescribed the usual anodyne lotions, with frequent bathing of the finger in warm water.

In a few days thereafter, she visited me again, bringing with her a small piece of bone about a half inch long, one-fourth of an inch wide, and perhaps one-eighth of an inch thick. This bone looked as a particle that might have been fractured by a sudden mash, or a blow, upon the finger. She stated that she felt it break loose from the remaining bone, and that it soon came out just below the last joint of the finger, a short distance above the nail. She stated that soon after it broke loose one end of the broken piece protruded through the skin, and that she took hold of it and drew it out. She showed me the wound, freshly made, by its exit. At that time I gave but little thought or attention to this incredible narration, but told her that all the pre-existing pain had depended upon this fracture, which had occurred without her notice or recollection, and that the exit of the bone assured her early and sure relief.

Within a short time after this, she returned to consult me further. She brought with her another and larger piece of

* Read before the Medical Society of East Tennessee, Greeneville, March 26, 1891.

apparently freshly expelled and healthy looking bone; showing the fresh injury to the flesh and skin through which it had passed, nearly or exactly at the same point through which the first had passed. This, she stated, like the first, had, within a short time after fracture, spontaneously made its exit through the flesh. I particularly noticed these bones; they were devoid of periosteum, but appeared to be sections of sound bone.

This disease has continuously existed from that date to the present time, being now 21 years.

Having requested the patient to take care of all the bones thus exfoliated and expelled, I am now enabled to place before you 500 pieces or sections of bones, thus separated and spontaneously expelled during a period of 21 years.

These sections comprise nearly all, if not all, the digital, metacarpal, and carpal bones; also the bones of the radius, ulna, scapula, and sections of the left side of the inferior maxillary bone. The whole of the hand-bones have been thrown out, section by section. All of both radii and ulnæ in sections of various sizes and shapes, have been spontaneously thrown out, and replaced with incredible speed, by new osseous material, which has again, by the same process, been again expelled, and again replaced, as the bones, now presented, will attest.

Of the pieces before you, there will be noticed fourteen entire sections of the fore-arm bones, averaging $2\frac{1}{2}$ inches in length—some diagonal, others transverse. Eight of these sections have portions of articulating surfaces—either with carpal bones or with the humerus. Fifty other pieces—sections of radius and ulna—average over $4\frac{1}{2}$ inches in length; some of them comprised of one-half of the circumference of the bone, and others one-third, one-fourth, etc.

In these bones, thus discharged, is found, in sections, the whole of the spinous process of the scapula, with many broad sections of its dorsum.

In these 500 sections of apparently healthy bones, at date of their exit, are seen six pieces from the inner posterior angle of the left inferior maxillary bone. These measure over one inch in length and one-fourth wide. These are of very

recent expulsion. These were thrown off of the bone, into the mouth, producing little more than the usual limited or moderate hæmorrhage with a tendency to strangle or choke the patient. I am informed by the patient and attendant that recently, to prevent apparent strangulation, she was forced to swallow a couple of sections as soon as they were freed from the flesh, through which they protruded.

An average in length of these 500 pieces will exceed one inch, and their thickness never less than the entire outer layer of bone from which they are thrown.

Having thus briefly stated these few facts as to these bones in form, size, etc., what I may hereafter state of one applies to all.

These bones break without apparent cause. They are all devoid of periosteum and cartilaginous appendages. They come forth clean of all surroundings, as do the bones from boiled meats. A short time prior to the break or fracture of the bone, the patient feels more or less pain in the location, and of longer or shorter duration. Some bones break within a very short time; others, after a much longer time, from manifestation of pain in the parts. The patient states that she always distinctly feels the break of each section of bone; says that, in most instances, she is also able to hear the break with distinctness. This is followed, in almost all instances, with lancinating pain, which, in due time, partially subsides, but in most instances, the pain is more or less severe and continuous, until the fractured or separated fragment or section is expelled. This is always naturally or spontaneously accomplished, and at widely differing periods of time. In some instances, a section of the radius or ulna, two or three inches long, one-half or three-fourths of an inch wide, as high up as the centre of the shaft, a distance of five or six inches from the wrist, will be spontaneously expelled, within less than one hour, from the back of the hand. At another time, the space of one or two weeks is required to expel it. In no instance, is there any induration, inflammation, swelling, increased heat, redness, or suppuration, forerunning, accompanying, or following, this singular and often multiplied phenomenon.

While all the bones of the hand and fore-arm are here exhibited, showing their articulating extremities perfect, at

no time has the articulation of any joints been hindered. No enlargement or atrophy, no deformity or perceptible decrepitude, has resulted. Every joint is perfect in the flexion and extension of the limb; in the pronation and supination.

It will be noticed that all these bones are broken with a clear vitreous fracture, and, generally, have sharp, cutting edges. The bones are not abnormally brittle, but the opposite; many of them, after lying dry for ten or twenty years, are found to be strong, and, some of them, elastic. Many of the longer and thinner sections are noticed to be slightly warped and crooked, from age or from slight pressure in the package. The bones of secondary formation are thicker in their bony structure, and diminished in their canaliculi. They are also less white, bordering, in color, on a light saffron, and hence easily distinguished from the original.

However unaccountable and occult may be the undefined cause, or joint causes, producing this phenomenal case, it is an assured fact that this patient now has the third set, if I may so term it, of bones in the left hand and fore-arm, and secondary bones of the shoulder-blade, and in portions of the left inferior maxillary.

While I feel assured that the foregoing brief narration of undigested facts, well known to large numbers of intelligent citizens, now residing within less than fourteen miles of this place, cannot fail to awaken the most grave and serious thoughts in the mind of the intelligent scientist, I will be excused for referring you, in substantiation of the foregoing, to Dr. J. P. Easterly, of Pate's Hill; Dr. J. B. Gilleyland, and Dr. C. P. Fox, of Greeneville; Dr. A. A. Ottinger, of Warrensburg; Drs. Leming and McCallum, of Cedar Creek; and Dr. Bates, of Caney Branch—all of this county; also to Dr. Darius Neas, of Parrattsville—most, if not all of whom are graduates of first-class medical colleges.

This patient is living in this county, thirteen miles southwest of this place (Greeneville), 71 years old; and, excepting this singular osseous disease, is in average good health. An examination of her hand and arm will show no appreciable defect. The arm has not shortened; all the articulations are perfect. The arm and hand are greatly scarred

from fragment exits of bones, which are generally thrown out on the back of the hand, though many from other localities. Nearly all the fore-arm bones have passed down the outer portion of the arm, to the back of the hand, and made their exits there.

In most instances, a section of loose bone, as high up as the middle of the fore-arm, has been propelled, by some vicarious muscular action, down the arm and forced through teguments on the back of the hand, and ejected entirely without any aid whatever. So singular is this vicarious muscular action, and so unerring and effectual, that it is reasonable to infer that each, of all the vast number of ejected bones, would have been complete, if not aided, as in some instances, by the fingers of the other hand of the patient, after the end had protruded through the skin. In no instance has any other aid been either given or required.

What can thus break these bones? is subject for much scientific thought and for elaborate investigation. That it is not done by muscular contraction, is evident from two facts: 1st. The muscles are not felt or observed to cramp or forcibly contract; 2nd. If they did, the bones are fractured transversely, diagonally, and longitudinally. And in addition to these two facts, the bones appear much too strong to be thus broken by muscles acting only parallel with their shafts. Can the fracture be produced by any hitherto unknown magnetic, electrical, gaseous, or chemical action or force? Or can there be an abnormal inequality of morbid development in one portion of bone, so as to produce these numerous and diverse fractures? Can they depend upon morbid inequality of temperature? Or do they depend upon some latent chemico-vital action? However abstruse the phenomena, and however metaphysical and intangible the problem, science should be able to account for matters of plain facts, however mysterious.

Another feature of great astonishment in this case is—by what superadded or vicarious power do the muscles; as it were, take hold of the detached piece of bone, propel it, as by peristaltic power, to a remote place, from its anatomical

position, and thrust it through the flesh and skin, and out of the limb entire? Why is it that no inflammation or supuration follows the wounded flesh, produced from their passage, or from the laceration produced by their exit? In every instance, even after the protrusion of entire ends of the radius and ulna, over two inches in length, the wound heals by first intention. From all the wounds (over 500) thus produced, and extending in time over 20 years, I will be within the facts by stating that not a teaspoonful of pus has been formed. On no occasion has there been but a few drops, and those only from the large wounds, made by the expulsion of entire sections, transversely broken off, of the radius or ulna. Not one drop has ever been formed at a depth greater than the subcutaneous tissue.

At one time the flesh will appear altogether intolerant of these fractured particles of bone, and throw them off with incredible speed; at another time, a loose piece of bone two inches or more in length, and one-half or three-fourths inch wide, will quietly remain under the skin for weeks, producing no swelling or inflammation; and, all of a sudden, the parts pain, and the piece is spontaneously moved and ejected. At no time have the joints of this affected limb failed to articulate.

It is, to my mind, plain that all these ejected bones were necrosed or dead before their separation. The fact that they were all devoid of periosteum and appendages; that their exit produces no shortening of the limb or other deformity, evinces the fact that within the separated periosteum ossific deposit has occurred to a sufficient extent to hold the flesh in its normal situation, to maintain muscular traction, and to permit articulation of joints.

Whether or not this new ossific deposit surrounds the entire shaft of the bone, so as to require it to break through it, or not, cannot be told; but it is a fact that at the expulsion of a large, transverse section of ulna or radius, no appreciable loss of bone is observed, either by the patient or others, which can only be accounted for by the fact that os-

sific concretion, within the periosteum, is, at the time, sufficient to perform the functions of the lost bone.

The facts related as to this singular disease of bone are, perhaps, without a similar record in the more ancient or modern elaborate treatises on diseases of the osseous system. *Mollities ossium* bears only the slightest resemblance, especially as to *subjects* liable to peculiar diseases of bone, which is admitted not to be, pathologically, either clear or satisfactorily diagnostic; While this is regarded more or less as occult in cause, effect, pathology, etc., it shows, in none of its features, the least analogy to the disease thus related. Sir A. Cooper, Travers, Mayo, Solly, Druiitt, and Gross, in their elaborate researches, relate nothing so odd, so strange, so incredible, so prolix, so irrational, so unaccountable, and so indefinite, as this case—odd, not only in *one*, but in *every* feature. It is evidently idiopathic, though, so far as it has advanced, it is strictly confined to only the one side of the patient.

This lady is of German parentage, medium size, of bilio-sanguine temperament, rural in habit and vocation, the mother of one child, now 45 years old. She has not been exposed to any poisonous chemical combinations; is free from every venereal or syphilitic taint, either hereditary, congenital, or acquired. She is very largely and favorably related, both in Greene and Cocke counties. Her postoffice address is Caney Branch, Tenn.

For want of a better or more explicit term, by which to define the unaccountable phenomena in this case, I will be pardoned for suggesting the term, *Morbus Occultus Ossium*. This term, so latitudinous in construction, and void of precision as to cause and effect, appears to be both admissible and required.

If any author, either ancient or modern, of either continent, has found, in all the broad fields of research, a similar case in peculiarities, I am not aware of the fact. Another such case would not solve or explain, but duplicate the apparent mystery. The incredible nature of this case, its apparent impossibility, its abstruseness in so many par-

ticulars, have conspired to induce me to withhold from the profession any public report of the same until now; and at this time I am induced to do so at the urgent request of some of our profession, who, knowing many, if not all, the singular facts connected with it, deem it unfair to longer withhold from the profession such a singular concatenation of pathological data.

ART. VIII.—**Prevention and Treatment of Puerperal Convulsions.**

By R. H. GARTHRIGHT, M. D., of Vinton, Va.

In the *Virginia Medical Monthly* of October, 1887, I reported two cases of puerperal convulsions treated principally by hypodermic injections of morphine, both of which recovered. Not long after writing up those cases I treated two others; and though I have attended from twelve to thirty cases of midwifery every year since, not a single case of puerperal eclampsia has come under my observation.

I attribute this to the fact that my cases which needed it received treatment prior to the date of parturition. In one or two, which I did not see before labor pains commenced, there were severe headache, and unusual nervous disturbances, but a hypodermic dose of morphine succeeded in driving away the pain, and leaving the patient in a state of tranquility.

I make it a rule to see my patients before the day of labor comes upon them. Many cases need treatment. Or, if medicine is not demanded, they need advice about diet, exercise, etc. When there is much œdema of the extremities, I have had good results from a combination of infusion of digitalis, tincture of squills and syrup of the iodide of iron. To some, I have given benzo-salicylate of lithia, and it has always done them good. If the kidneys, bowels, and skin perform their functions well, we may not expect a case of puerperal eclampsia.

If every pregnant woman could be seen by a physician

before her confinement, treatment would undoubtedly, in many instances, prevent convulsions. But when we go to the bedside of a woman, and find her in the midst of terrible suffering and excitement; or, just after sight of the new-born babe has awakened in her bosom, for the first time, the mother love, and see her eye balls suddenly roll backwards, face become contorted, and muscles rigid and fixed, what are we to do? I am convinced that we can find no remedy in the materia medica that will accomplish half as much good as hypodermics of sulphate of morphia. In the two cases referred to above, I used this treatment in combination with bromide of potassium and chloral hydrate, and they both recovered. There was no cessation in the fits, however, until morphia was injected. One of my cases was of an unusually severe type, and I believe she would certainly have died had not morphia been employed in treating her.

Should I ever be called upon to treat another case, I propose to use larger doses—say half a grain at first, and if the convulsions return, one-fourth grain until they cease, or patient becomes thoroughly narcotized.

This is not a new remedy for the trouble under consideration. It has been used successfully for a number of years.

I find in Braithwaite's *Retrospect* of 1882, an article on the subject from the pen of S. Maberly Smith, resident surgeon at the Lying-in Hospital, Melbourne, Victoria. He says:

“ Having found the usual treatment for puerperal convulsions by chloral, bromide of potassium, bleeding, and chloroform very unsatisfactory, by the advice of Dr. Featherstone, I tried hypodermic injections of morphia. The result has been very successful in my own hands and in others.

From study of fifteen cases treated in this manner in the Melbourne Lying-in Hospital, and by gentlemen outside, I have come to the following conclusions:

The quantity of morphia to be injected is from one-fourth to one-third of a grain, according to the severity of the case. The simple solution of morphia is more efficacious than

morphia and atropia combined. One large dose is better than two smaller ones.

Patients suffering from puerperal eclampsia, whether sensible or insensible, appear to resist the dangerous effects of the drug. It seems to have no bad consequences in cases in which, under ordinary circumstances, morphia would be strongly contra-indicated."

He says that since the treatment has been adopted, no case of puerperal eclampsia has resulted in the hospital. In the *Obstetrical Journal of Great Britain and Ireland*, December, 1876 (*American Supplement*), Dr. Henry F. Campbell, of Augusta, Georgia, in discussing this subject, writes: "Irritation being recognized as the proximate cause of the frightful phenomena we have to combat in puerperal eclampsia, the well known and universally acknowledged superiority and efficiency of opium, and its preparations for controlling irritation, renders it the first, the most ready and the most promptly effectual of all the means at the command of the practitioner.

Its hypodermic administration, either alone or in combination with atropia, and its ready applicability by the rectum, still further entitle opium to unrivalled pre-eminence as the combatter and controller, and the first application to to be made in eclamptic irritation of the motor ganglia and excitor nerves."

Now, I will not discuss this subject further. I could produce the names of many other writers who have used this remedy with success, when every other had failed. This paper was begun simply to relate my two additional cases.

December 5th, 1887.—I visited Mrs. K., a primipara. She was robust and healthy from childhood. Labor had been progressing six or eight hours when I saw her at 4 A. M. Was told she had something like a fit. Administered chloral. At six o'clock A. M. she gave birth to a fine boy. Husband was absent. When informed it was a boy, she smiled and said, "Mr. K. will be so glad." Delivered placenta, and arranged her comfortably in the bed, and then sat down with the family to breakfast. In a few minutes was called to go to her. Found a violent convulsion on her. Gave a hypodermic of one-sixth grain of morphia, and left the room

dark, and everything quiet. Administered five or six hypodermics of morphia through the day at intervals of from one to three hours. She had a number of violent convulsions, but they ceased at 9 P. M. Kept her narcotized with morphia for two days. She recovered.

I was called March 26th, 1888, to see P. F., a colored woman, aged 28 years. She quarrelled with a man, grew very angry, walked into her cabin, sat down by the fire, and toppled over on the floor with a convulsion. When I arrived an hour or so later she had had two attacks. Examined her. Found os uteri undilated. Convulsions came on before labor pains were felt. Gave full dose of chloral and bromide of potassium, and directed some eight or ten grains to be given every hour. Left, and returned in three hours. Convulsions more severe, and more frequent. Bled her; no visible good resulted. I then began hypodermics of morphia. Called Dr. R. C. Irving in consultation. He arrived at midnight. Labor pains had commenced. At 2 A. M. she was delivered (27th). Convulsions continued at intervals of ten or fifteen minutes until about five o'clock—three hours after birth—when she died. In this case chloral and bromide of potassium were pushed, and very little morphia used.

Clinical Reports.

- (I.) Aniline Injections for Cancer. (II.) Bichloride of Gold and Iodine in Phthisis. (III.) Electrical Application of Iodine to Scrofulous Glands.

By M. D. HOGE, Jr., M. D., of Richmond, Va.

SURGEON TO SHELTERING ARMS HOSPITAL, ETC.

Pursuing some lines of investigations suggested by some of our clinicians, both in this country and abroad, I have thought that a few facts recorded in the beginning may be of use in stimulating and properly directing our energies.

(I.) Aniline Injections for Cancer—Failure.

In the June number, 1891, of *Virginia Medical Monthly*, is a selection referring the hypodermic method of injecting a solution of aniline-violet, as recommended by Mosetig, of

Vienna, for such malignant tumors as were considered beyond the safety line of operation.

About four months ago such a typical case presented itself to me for treatment. A negro woman, fifty-six years of age, was found suffering from carcinoma of the cervix, and also of the right mamma. The discharge from the vagina contained a good deal of blood and pus, and emitted a very offensive odor. This was treated by injections of a solution of bichloride of mercury and iodoform tampons. The breast was very large, firm, and nodular; the pain constant; the axillary glands greatly involved, hard and tender to touch. The patient declined any surgical interference looking to removal, which indeed was not urged, but agreed to the aniline injections. I secured a pure sample, free from arsenic, from Parke, Davis & Co., and injected ten minims of a 1:300 solution. In two weeks, this was repeated—only the solution was made a little stronger, being 1:200. In the last two injections (six in all,) the quantity has been increased to twenty minims of 1:100. Each time the needle was stuck directly into the solid substance of the tumor in the breast. The operation was not very painful, and the only complaint was a slight burning sensation, which lasted about half an hour afterwards.

The results obtained from this method of treatment has been a complete *failure*, for while no abscess was formed or any injury perceptible, the tumor has steadily grown in all directions, and the injections of aniline-violet have had no apparent effect one way or the other.

(II.) Bichloride of Gold and Iodine for Phthisis—Improvement.

The treatment of phthisis by the hypodermic use of bichloride of gold and iodine, as suggested by Dr. J. Blake White, of New York, has met with much better success.

For the last three months I have been treating a young man who undoubtedly has tuberculous laryngitis; bacilli have been found in the sputum as corroborative of the physical symptoms. Three drops of the solution were injected at intervals, varying from two to twenty-one days—in all nine injections. A small ulcer to the right of the median line on the epiglottis healed entirely, the congestion of the whole throat disappeared, and the patient has gained in weight. There is still a tired and sore feeling after talking, and in very damp weather.

With the continued use of the medication there is every prospect of a complete holding in check of the disease, if not a permanent cure.

(III.) Electrical Application of Iodine to Scrofulous Glands—Successful.

That scrofulous glands are benefitted both by the external use of tincture of iodine and electricity, are facts familiar to most practitioners; but the method of combining the two agents at one sitting admits of a few words.

A young man applied to me at the Sheltering Arms Hospital for relief from an enlarged neck, which was also pain- ing him. The cervical glands on both sides, below and in a line with the ears, were very much enlarged, giving the neck somewhat the appearance of an Indian club. The circumference was two inches greater here than it was lower down. I decided to try the anodal diffusion of iodine in this case, and, as the sequel proved, with very encouraging results. The negative pole of an ordinary galvanic battery was covered with chamois skin, over which was fitted an ordinary hard rubber cup to prevent evaporation. Ten drops of tincture of iodine was poured on the chamois skin, this pole applied directly to the tumor, and the positive pole at some indifferent point (as the hand). Six cells were switched in use for eight minutes. After two minutes application, a distinctly metallic taste could be perceived in the mouth, due to the presence of iodine, and showing that the medicine had permeated the system. At each sitting the negative pole was applied in this manner to each side of the neck.

At the present writing one side has returned to its normal size, and the other, while much smaller, has not disappeared entirely.

Peacock's Bromides in Severe Headache, with tendency to cerebral congestion, consequent on la grippe, were used "very successfully" by Dr. W. T. Strother, of Port Crescent, Washington—far more satisfactorily than any other preparation in similar cases.

Ponca Compound.—Dr. O. Gay, of Boston, reports (*Med. Mirror*, May, 1891,) a case illustrating its uterine alterative effect in a very remarkable degree.

Orbital Cellulitis following Facial Erysipelas. Patient 74 Years Old. *

By JOHN DUNN, M. D., Richmond, Va.

In the latter part of May, 1890, I removed several large polypi from the nose of a patient 74 years old. About one week later, June 1st, erysipelas began in the patient's right external auditory meatus, from which place it spread rapidly across the face. On June 5th, the patient's right eye began to be inflamed. Orbital cellulitis set in, accompanied by great protrusion of the eyeball, with immense œdema of the conjunctiva.

I did not see the patient from the time of the removal of the polypi until June 8th. At this time the exophthalmus was at its height, and was greater than I have ever seen in any case, except one of advanced cancer of the orbit. Both eyelids were œdematous. The conjunctiva and sub-conjunctival tissues inflamed and œdematous. The eyeball was totally immovable. The cornea was dry, and so great was the swelling of the pericorneal tissues that I feared a destruction of the cornea through interference with its nutrition. This destruction had already begun, as was seen by opaque condition of the lowest one-eighth of the cornea, where a limited ulceration was already in progress. Vision was totally lost in this eye, blindness coming on about two and a half days after the inflammation attacked the eye. Owing to the condition of the cornea, no examination of the fungus could be made. The erysipelas had crossed the bridge of the nose, and was descending the left side of the face. The patient breathed with perfect comfort through his nose, nasal respiration having been entirely prevented while the polypi were present; nor had there been any intranasal trouble during the duration of the erysipelas.

In questioning Mr. L., I found out that he had had several attacks of erysipelas prior to this. There was one point about the case worthy of especial note—the patient at no time had complained, nor did he complain of severe pain in the orbital region, nor was any undue pain produced by pressure upon the eyeball.

This absence of pain, in the presence of symptoms so severe as those mentioned above, may be considered as of no

* Selected Cases from the Clinic of the Richmond Eye, Ear, and Throat Infirmary.

little importance in assisting us to form a correct prognosis in cases where orbital cellulitis is consequent upon facial erysipelas.

Absence of pain here showed that neither the walls of the orbit nor their more tiny membranes had been attacked; showed that there was no panophthalmitis; it showed further that no orbital abscess was in process of formation; it showed probably, that, however great the inflammatory exudation among the orbital structures had been, the orbital contents had adapted themselves to its presence without being compelled to yield to pressure death (if we except the small patch of corneal ulceration).

There were no symptoms pointing to thrombosis of the ophthalmic vein, and thence of the sinuses, or to meningitis. Mr. L's other symptoms were only those belonging to uncomplicated facial erysipelas.

Another point of interest is that Mr. L. was totally blind in this eye within three days after the eye became involved, and that he never regained the power of distinguishing light from darkness with it.

There has been much discussion as to the cause of blindness in these cases. Thrombosis of the central retinal artery has been suggested, and while the possibility of such a cause must be admitted, it is highly improbable that it is even the cause in such a case as that of Mr. L. Again, optic neuritis, due to direct invasion by the erysipelatous process, has had its advocates. In the case under discussion, there was nothing to point to this as the cause of the blindness. In the majority of cases where examination of the fundus could be made, there has been found a great narrowing of the retinal arteries and veins, and the cause of this narrowing (to complete obliteration of the blood current) is, I believe, in cases such as that of Mr. L. the cause of the blindness.

Here the rational explanation of this narrowing of the retinal vessels would seem to be the one which refers it to a mechanical cause, to a mechanical constriction of the vessels. This is brought about probably by a double agency, the stretching of the nerve, and the direct pressure of the swollen

perineuritic tissues in the nerve sheath. The constriction of the vessels in the nerve from direct pressure of the swollen retro-ocular tissues on the nerve sheath would, of itself, seem to be sufficient answer to the question: What causes the constriction of the retinal vessels as seen by the ophthalmoscope in cases of orbital cellulitis, accompanied by excessive exophthalmus? Though direct pressure on the nerve sheath may be the only cause in cases such as that of Mr. L., it is extremely doubtful whether it is so, or whether it is even the greater half of the cause.

We have left out of view the fact that the eyeball is forced forward, with comparative rapidity, several millimetres in advance of its normal position, the condition known as exophthalmus resulting. There is then necessarily a strain on the optic nerve, or its sheath, or on both. The continuation of dura mater, which serves as a sheath for the optic nerve, is very inelastic, and very loosely adherent to the optic nerve, and, besides, its retro-ocular origin is different from that of the nerve. In orbital cellulitis with exophthalmus the eyeball is forced forward, the sclerotic, *i. e.*, the continuation of the nerve sheath, being the part upon which the pressure is exerted. Necessarily there is also a strain on the nerve sheath.

If the optic nerve ceased just behind the optic disk, owing to the anatomical relationship of the optic nerve and its sheath, the strain from the pressure directed forward on the sclerotic would be felt almost altogether in the sheath, comparatively little in the nerve—the sheath slipping over the nerve somewhat as a glove over a finger. This nerve, however, expands into the retina, and this greatly alters the condition of affairs. Pressure upon the sclerotic from behind causes a strain on the nerve sheath in the forward direction, while owing to its different origin, the nerve resists this forward strain, and there is a tendency for the nerve and retina to be pulled backward, thus crowding into the already contracted optic ring more tissue. And while the adhesions between nerve and sheath and the anatomical provisions at the optic ring render the lines of strain more

complex than they seem above, still, I believe, the explanation of the obliteration of the retinal vessels is to be sought just here; that it is, in a great measure, due to strain at the optic ring, the pressure on the sclerotic forcing the ball forward, tending to contract the ring, while the pulling backward of the nerve tends to pull more nerve tissue into the ring—the result of this contraction of the optic ring being obliteration of the central artery and vein, and then blindness. Not long since, in an eye enucleated for injury to the ciliary region, the optic nerve having been cut well back, I had an opportunity of watching the different appearances at the disk, as after removing the anterior half of the ball, and fixing the sclera at its *free* edge, I pulled with forceps upon the nerve sheath or upon the nerve; from the experiment, I should say that mere extension of the nerve would, of itself, be amply sufficient to obliterate the lumen of the central vessels.

Under applications of warm bichloride of mercury (1:2000) kept constantly to the face, and attention to the patient's general condition, the erysipelas subsided in a few days. Repeated incisions on the conjunctiva were made in hope of saving a further destruction of the cornea. I do not know if they were of any real value, but the ulceration made no progress after the swollen conjunctiva had been pretty freely bled.

I saw the patient for the last time August 1st, 1890, about two months after the appearance of the erysipelas. There still remained excessive exophthalmus, while beneath the conjunctiva in the orbital tissues was a great amount of inflammatory material which seemed to have assumed a more or less permanent character. Only the slightest movements had returned to the ball, so that it was still practically immoveable. Vision, nothing. The patient, however, suffered very little from a sense of discomfort in this eye. There had been no return of the polypi.

The removal of the polypi has been mentioned in connection with this case of orbital cellulitis because it gives rise to the following question: Could a wound, such as is left after the removal of polypi in the nose of a person subject to attacks of erysipelas, serve as an exciting cause to an

attack of erysipelas which originated on the skin surface as far from the nose as the external auditory meatus? The patient was free from all ear trouble, and had not the slightest nose trouble during the attack of erysipelas.

If the blindness, in such cases as the one above mentioned, be due to the constriction at the optic ring caused by the exophthalmus, then our only way of preventing it is by making early, deep incisions into the orbital tissues, avoiding, as far as possible, the muscular insertions, and by promoting free bleeding from these incisions by the aid of poultices. Unfortunately, too often, as in case above, the patient is not seen until this treatment will prove of no avail, or until some complication has set in which will deprive us of all hope of saving the eye.

Correspondence.

Cocaine an Aphrodisiac and Remedy for Spermatorrhœa.

Mr. Editor,—In a Western Journal, the anxious query appears: "Is cocaine an aphrodisiac?" And having nowhere seen anything like a decided, definite reply to the question, I beg leave to answer respectfully, but categorically, No! Cocaine hydrochlorate is not only *not* an aphrodisiac, but, given in several-grain doses, or in smaller ones, repeated so as to assert itself at all distinctly in the direction referred to, it is very obviously and conspicuously *anti*-phrodisiac in its effect. And whether this effect be direct or indirect, it is also a fact—and one of easy proof—that if the agent be pushed still a little further, not only is this alleged effect increased *pari passu*, but even the genital organs will be dwarfed (temporarily, of course), constricted or shrunken, exactly as by a cold shower bath.

A consideration of this invariable effect, along with that well-known one which brought the drug first into notice (*viz.*, local anæsthesia of the mucous surface to which it is

applied) has led the writer to resort to it—and with most gratifying results—in quite a number of cases of that widespread malady, spermatorrhœa, which, prevailing in all countries where there are young people, is worrying and harassing alike to patient and doctor. And whilst most serious and distressing to the former, to the latter, there is scarcely any other disorder known whose treatment (*i. e.*, hitherto recommended and tried, so far as I know,) has been so unsatisfactory and full of disappointment.

The rationale is plain: If the theory of spermatorrhœa, as generally accepted, and which led us to combat it with Lallemand's porte-caustique, etc., is correct, then the main factor in the malady, and the one which perpetuates it, is essentially redundancy, or over-secretion of seminal fluid; and this is due to the morbid irritability, or super-sensitive-ness, or hyperæsthesia of the urethral mucous lining at and about the ejaculatory duct.

The local hyperæsthesia here is, therefore, *the disease*. Then how better antagonize or destroy hyperæsthesia than anæsthesia? And what better means of doing this here, than by injections of muriate of cocaine, which is, par excellence, *the* anæsthetic of anæsthetics for local uses? At the same time it is safe, certain, and equally applicable and efficient for the slow, gradual, insensible loss of semen, as in what are regarded, fearful cases of frequent, obstinate, nocturnal emissions.

And now what better treatment of this distressing disorder than, after weakening the back-lying cause of the hyperæsthesia with constitutional doses of such an antiphrodisiac, as I aver the hydrochlorate of cocaine to be, than to attack it at the place it expresses itself in the shape of the exciting cause, hyperæsthesia, by the self-same means which for local anæsthesia, all aver to be sure and powerful.

My experience so far bears out the theory. Try it.

RO. S. HAMILTON, M. D.

Staunton, Va., Sept. 2nd, 1891.

Extra-Uterine Pregnancy.

Mr. Editor:—I have just operated for extra-uterine pregnancy, and lost my patient. She was four months pregnant; had been treated for several diseases, and was brought in the hospital in a state of collapse. I opened her abdomen in two hours after she came in, and found, what I expected an abdomen full of blood, and a sac with foetus and loose placenta of three or four months.

Her pulse could at no time be counted, and although it was rather better during etherization, ceased entirely soon after the patient was sent to her room. The foetus had been dead for some weeks. The placenta was loose in the sac, and did not require separation. Although the bleeding vessels were ligated in a very short time after the abdomen was opened, it was done too late. The right tube had originally contained the ovum which had burst through the tube into the broad ligament. She had at no time any sign of menstrual discharge since her pregnancy began; neither did any decidua or other substance pass from her uterus.

Yours very truly,

I. S. STONE, M. D.

1309 H. Street, N. W., Washington, D. C., Sept. 19th, 1891.

Treatment of Goitre.

Mr. Editor,—In reading the paper by Dr. Hunter McGuire and the report of the proceedings of the Richmond Academy of Medicine and Surgery in this month's issue (August) of the *Virginia Medical Monthly*, I was reminded of a case of goitre of *unusual* size that I treated several years ago by iodine. The case was of *long standing* and *very large*. The patient lived about fifteen miles across the mountains—a section I seldom visit. I used the tincture of iodine locally and Donovan's Solution gtt. v. three times a day. I had no idea of doing the patient much good, and thought nothing more about the case; but I was passing her house about six

months later, when she hailed me to *pay me for the medicine*, stating that the "*tumor got well right away*." You can imagine my *surprise*. I must say, however, that this was about the only time I can remember having been "surprised" in that way.

Yours truly, D. D. CARTER, M. D.
Woodstock, Va., August 28th, 1891.

Original Translations.

From the German. By M. D. HOFF, Jr., M. D., of Richmond, Va.

Deodorization of Iodoform by Creolin.

A patient, suffering from a bone-felon, applied for treatment to Dr. L. Vazci (*Rundschau*, May, 1891,) who wrote for a salve consisting of iodoform, two parts; creolin, one part; vaselin, twenty-five parts.

On visiting the patient the next day, he was much surprised to find that the salve was of a different color, but, what was of much more importance, there was not the slightest odor of iodoform. Most of the deodorizers contain some one of the ethereal oils which have an irritating effect; whereas creolin does not do this, but is itself a good disinfectant.

Pathological Anatomy of Diabetes.

From an examination of twenty-nine autopsies, performed on diabetics, Laundry (*Rundschau*, May, 1891,) gives the following:

The brain is more frequently diseased than has been generally supposed; there is often anæmia, œdema, and some atrophy of the convolutions. As is also well known, diabetes sometimes results from injuries to the spinal cord, and it has been observed in those cases of tabes when the bulbus has become affected.

The muscles of the heart are often pale, and show signs of fatty degeneration; the valves are remarkably free from disease. The blood generally presents a normal appearance—occasionally containing, on standing, an oily skim.

Its alkaline re-action is affected by the presence of diace-

tic and betaoxy butyric acid. There is generally congestion and œdema of the lungs. The liver is enlarged, hard, and shows fatty degeneration. There is often interstitial hepatitis, which can lead to genuine cirrhosis. The pancreas is atrophic; the stomach walls thickened.

Treatment of Appendicitis.

In addition to what has been said and written by surgeons on this important subject Fränkel (*Rundschau*, August, 1891,) gives the grounds for diagnosis and treatment which the general practitioner should take:

The perforations of the processus vermiformis are caused by accumulated fœcal matter; less frequently by foreign bodies which, leading first to inflammation, finally break through the tissue. Before, however, this takes place, the processus becomes glued generally to the ilium by adhesive peritonitis.

Fränkel opposes the view that there is, at this stage, always pus formation, and frequently the tumors felt in this region are due to the matting together of the gut in which sometimes the omentum is involved.

By an unusual length of the process, the abscess may empty into the bladder or behind the right kidney, or may even be mistaken for an abscess of the liver.

On account of the difficulties of a correct diagnosis, it is not advisable to call in surgical aid until the presence of pus is very certain; and until this has been proved, the intestines should be held quiet by the use of opium, and a general antiphlogistic plan of treatment adopted.

Employment of Nitroglycerin.

In recording his experience with the use of this agent, Béla Bosángi (*Rundschau*, August, 1891,) thinks it an excellent remedy in those cases in which a very prompt and quickly-acting drug is required, but he does not think the effects are very lasting. It can be employed for a long time without any serious results; it is not contra-indicated in acute diseases; and, finally, it can be used for differential diagnostic purposes. It has been given with very good results in the following diseases: Fainting, spasmodic asthma, opium poisoning, anæmic coma, restoration of the drowning, and collapse.

Iodide of Potash in Diphtheria.

After several years' hospital treatment by this means, and also in private practice since, Senenko (*Rundschau*, August,

1891,) recommends it most highly, as he has not lost a case since he has adopted this method. Adults may be given one-half to one drachm of iodide of potash daily; children, one-half the quantity. It should be given every three or four hours till iodism appears, or the membrane begins to come away, which takes place in from two to four days. If symptoms of heart-failure are recognized, it must be overcome by whiskey. Painting the throat is irritating, and should not be allowed; whereas, on the other hand, steam inhalations of a three per cent. solution of boracic or salicylic acid is highly recommended. The sub-maxillary glands should be rubbed daily with oleate of mercury.

Analyses, Selections, etc.

Pulmonary Consumption a Nervous Disease.

In the latest issue of the "*Physicians' Leisure Library*" (published by Mr. George S. Davis, of Detroit, Mich.), Dr. Thomas J. Mays, Visiting Physician to the Rush Hospital for Consumption, of Philadelphia, Pa., so ingeniously arranges groups of facts concerning the cause of consumption, as to make plausible again the doctrine, that this disease is essentially a nervous disease. He first produces evidence to show that consumption is not a contagious disease, and that segregation has no effect in diminishing its development. He next shows that phthisis is not dependent on a transitory, but on a protracted and long-continued disorder of the vagi; and hence that in laboratory experimentation and observation, it is very difficult to regulate the necessary degree of irritation in the vagi of animals to secure the desired result. Besides, in scanning literature, he has found eighty-one cases of phthisis in which vagus disease distinctly existed; and he thinks this too large a number to be a mere coincidence. Among prominent features in the history of the disease, must be noted its [comparative] absence in barbarous, and its prevalence in civilized communities. [A fact worth noting here is the relative infrequency of consumption among negroes in the Southern States during the age of slavery, when they had few cares and responsibilities, were well fed and provided for, etc., as compared with the excessive amount of the disease in this same race at the present day, when all the cares and responsibilities of provid-

ing for themselves are upon them. Insanity was rare in the negroes of the South prior to the Confederate War; since then it has become quite a common condition, etc. It was formerly asserted that chorea, for instance, in the negro was very exceptional; now it has become sufficiently common as scarcely to attract the attention of practitioners as a race disease.] Alcoholic excesses form one of the most potent, direct causes of phthisis. Syphilis is another. These are also well-known causes—directly and hereditarily—of insanity, nervous diseases, etc. But without further pursuing the details of facts, we give the following as the summary of the author's conclusions:

1. In all probability every disease possesses its attendant micro-organism.

2. The natural genesis of a disease is altogether different from its artificial transplantation.

3. The inoculability of a disease is not the least evidence of its practical contagiousness.

4. The theory of the contagiousness of pulmonary consumption rests almost entirely on suspicions, and on laboratory experiments which are unsupported by clinical facts.

5. Tubercle is not in itself a menace to life.

6. There is no correspondence between the number of those exposed to the bacilli and those who contract pulmonary consumption.

7. All therapeutic and hygienic measures which are based solely on the bacillary origin of consumption are disastrous failures.

8. Consumption is inherited in about fifty per cent. of cases.

9. Hereditary disease is not contagious unless it affects the nervous system.

10. Catarrhal phthisis may be produced in animals by section of the vagi.

11. In pulmonary consumption, the vagi are primarily involved.

12. Alcohol and syphilis produce pulmonary consumption by inducing vagus disease.

13. In all probability, arsenic, lead, mercury, brass, and other substances produce consumption by reason of their specific action on the nervous system.

14. Diabetes, beri-beri, leprosy, and probably lupus and pellagra, are intimately associated with pulmonary consumption, because fundamentally the evidence appears to show that they are nervous diseases.

15. The neurotic theory of pulmonary consumption shows such a rational connection between cause and effect as no other theory does, and explains why nervous or mental shock, whooping-cough, alcoholism, syphilis, arsenic, mercury, etc., produce this disease; why the latter is associated with insanity, with disease of the brain, spinal cord, and peripheral nerves, with diabetes, beri-beri, leprosy, pellagra, etc.; why it is inherited; why the youngest and the oldest of a family are most prone to it; why segregation or quarantining is useless; and why the hypophosphites, cod-liver oil, electricity, and the maintenance of the nutrition-tone, are such valuable aids in the treatment of this disease.

Euophen—Its Pharmacy and Therapeutics.

Euophen, new antiseptic medicament, designed to replace iodoform, is obtained by the action of iodine upon isobutylorthocresol. Its pharmacology and bacteriology have been studied by Siebel, and its therapeutic action by Eichhoff. It is an amorphous, yellow powder, exhaling a slight odor resembling that of saffron. It is insoluble in water and in glycerin, and is more soluble than iodoform in alcohol, ether, chloroform, and the oils. Euophen adheres better than iodoform to the skin and to open wounds, and an equal quantity, by weight, will cover a surface five times greater. This iodide of isobutylorthocresol is not toxic. Dogs were found to take 2 or 3 grammes (30 or 15 grains) of it with impunity, and the human organism will bear one gramme (15 grains) of it without unpleasant phenomena, save a slight feeling of weight in the stomach. The urine of patients who had absorbed euophen did not contain iodine.

Eichhoff employed it successfully in dressing both hard and soft chancres. He used it as a powder, and also in the form of a 1 per cent. or 2 per cent. ointment. He furthermore employed it successfully in hypodermic injections for syphilitic patients suffering from the secondary and tertiary symptoms of syphilis. These injections consisted of one gramme of euophen to 100 grammes (3iij+) olive oil, and of this, one-half to one cubic centimetre was injected daily in one dose. Eichhoff also employed euophen in varicose ulcer and ulcerative lupus, as well as in eczema, psoriasis, and favus—in all of which it proved to be efficacious.

Ointments containing 1 to 2 per cent. of euophen are as strong as need be used. Five per cent. ointments caused a certain amount of irritation.—*La Semaine Medicale*, July 29, 1891; *Repertoire de Pharmacie*, August 10, 1891.

Placenta Prævia.

Dr. F. Lydston Newman, of Detroit, Mich., says (*Phys. and Surg.*, September, 1891), that of the causes of antepartum hæmorrhage the most appalling is placenta prævia. The etiology is obscure, but the proportion of multiparous women to primiparous is six to one. Subinvolution predisposes to it; a relaxed uterus from rapid child-bearing is another cause. Muller believes it the result of an arrested early abortion—a plausible theory. Ingleby's two cases are well known, in which the fallopian tubes opened near the os internum, causing placenta prævia three times in one mother, and ten times in the other. Possibly, a mild, chronic metritis (catarrh) may so smooth the mucous membrane as to be a predisposing cause.

The clinical features vary with amount of placental disc overlapping the os internum—the amount of unavoidable hæmorrhage being relatively greater, the more central the implantation—hemorrhage is caused by stretching of the lower uterine segment to admit the passage of the child. Therefore the amount of unavoidable separation will be a circle with a diameter of 4.5 inches, which is the largest circumference of the child's head. Uterine contractions, which with a placental attachment at the fundus tend to close the uterine blood-vessels after separation, only increase the rush of blood from the uterine sinuses held open by the constantly dilating lower zone.

Placenta prævia is usually unsuspected before the advent of the first hæmorrhage, which usually takes place between the 28th and 36th week in complete cases; while in incomplete it is most common after 32d week. The flow comes on without warning and without pain, and in exceptional cases is so profuse as to cause death, but is usually arrested, only to recur again. There is one form very much to be dreaded, in which no sharp hæmorrhage ever occurs, but the blood oozes drop by drop until the patient is completely exsanguinated. Another factor which increases the dangers of placenta prævia is the large number of mal-presentations met with. According to Lower 32 per cent. are abnormal.

The diagnosis is impossible during the first half of pregnancy, and is not always easy during the second half. It is simple enough except in those cases in which the internal os is too small to admit the examining finger. Obscured ballottement, the boggy feel, and the placental bruit over the lower uterine segment, all point in one direction; but the diagnosis is only rendered positive when the fleshy,

uneven granular structure of the placenta is felt through the os.

Prognosis.—Maternal mortality is one in four; infantile, two in three. Improved methods of treatment have much reduced the above figures. Lower and Hofmeier publish results of 128 cases in which the maternal mortality was only 4.5 per cent., and 60 per cent. for the infants. Whatever treatment is adopted, the child's life should be of secondary consideration, and the old expectant plan of treatment ought to be obsolete.

The most approved treatment of placenta prævia is delivery with as little delay as possible. Suppose we have made a diagnosis before the os has begun to dilate; (this is not very often done), however, if in the sixth month of pregnancy, without warning or pain, with undilated os, hæmorrhage occurs, and other symptoms present vividly enough to make us sure of diagnosis, the physician has no right to temporize. A tampon should be at once inserted and left in situ from three to six hours, according to the severity of the pains excited by it. Some dilatation of the servix having occurred, if the hæmorrhage continue, separate the placenta as far as you can reach, after which in *marginal cases* with head presentation, the membranes can be ruptured, ergot given and the case left to nature. In *most lateral cases* and in *all central* this course is too dangerous. Here, after separation of placenta, further dilate the cervix by Barnes' dilators, or, by the fingers. As soon as the cervix is dilated the size of a half dollar, turn by Braxton Hicks' method—the patient being placed completely under chloroform, the finger is passed round the placenta or through the placental tissue if necessary. Hæmorrhage ceases when the leg is brought down so as to hold the breech against the bleeding vessels. Then deliver slowly for fear of rupturing the intensely vascular cervix. Nowhere in obstetrics are perfect antiseptic precautions more essential. The method of delivery must, in great measure, depend on the sum total of symptoms in any particular case.

In Crede's clinic there occurred 64 cases of placenta prævia between 1883 and 1887, the maternal mortality being 11 per cent., and 55 per cent. for the children. Treatment consisted in combined version and slow extraction. In 15 cases treated by other methods maternal mortality was 33½ per cent.

Nordman (*Arch. Gynec.* Vol. XXXII), utilizes 45 cases occurring at the Dresden clinic, in a total of 5,779 labors. In

12 cases treated by tampon, with or without rupture of membranes, all mothers lived; the record does not show if any of the children died. Delivery was allowed to take place spontaneously. In 23 cases treated by version and immediate extraction maternal mortality was 17.3 per cent., and 5.8 for the infants. In 6 cases version was followed by slow extraction. One mother died of sepsis, and all the children were dead. This seems decidedly in favor of the first method, but these were all marginal cases. Nordman concludes that the third method is preferable in private practice notwithstanding the excessive infantile mortality.

Dr. Lydston reports briefly some cases in his practice.

December 17, 1890, Mrs. C.; age, 35; fourth labor. A midwife who had been in attendance, said that the woman had been in labor five hours; waters broken. What alarmed her was the continual flowing, and the exsanguinated appearance of the woman. The midwife had given ergot (an ounce). Examination revealed os half dilated and freely dilatable; placenta prævia lateralis; child lying crosswise in uterus, which was in a state of tonic contraction. Hæmorrhage had been great and was still going on. He immediately introduced his hand and separated the placenta as high as possible. This appeared to lessen hæmorrhage. He then foolishly wasted some time endeavoring to turn by the bipolar method, without chloroform, and only succeeded in having an arm forced down into vagina. He then put his patient completely under an anæsthetic which relaxed the uterine spasm, and passed his hand into uterus, got hold of a foot, turned and delivered in about ten minutes. The child was dead. Placenta delivered by expression. There was no post-partum hæmorrhage, and the woman made a slow but uneventful recovery.

March, 1890, Mrs. R., sixth month of pregnancy. Previous labors commonplace, except difficulty in delivering the placenta. He prescribed rest and uterine sedatives and flow ceased. She remained in bed three days, after which was about, feeling well. Two weeks after, without warning, blood came with a rush. This was at 12 A. M. When he reached her side she was having pain; os was dilated sufficiently to make out a placenta prævia centralis. He immediately separated the placenta as high as he could reach, and the hæmorrhage was partially controlled; a tampon completely controlled it. He left but returned several times during the afternoon. Light labor pains all the time, and at 6 o'clock removed the tampon. The os was nearly di-

lated, and there was very little hæmorrhage. At 10 P. M. the os was fully dilated, and only placental tissue within reach. Dr. Carstens (in consultation) advised version and immediate delivery. Under anæsthetic Dr. Newman insinuated his hand through the placenta, grasped a foot and delivered in a few minutes—Dr. Carstens aiding extraction by strong supra-pubic pressure. The child lived two hours. The mother got along very nicely, and was up in three weeks. The very first day she was up and dressed she was taken with a very severe secondary hæmorrhage which sent her back to bed for a week again, after which she remained well. In March last, Dr. Newman delivered her again. This labor was normal except that it was extremely tedious, and he had unusual difficulty in delivering the placenta.

Case III.—Mrs. H., aged thirty-three; two children; previous labors normal. On 12th October, 1889, Mr. H. took him to his wife, who was in labor and “flowing to death.” He drove very rapidly about four miles. On arriving it was apparent that the hæmorrhage had been simply appalling. Everything about the bed was saturated with blood. Mrs. H. was blanched and restless, throwing herself about, and almost pulseless. Respiration interrupted and sighing. In fact she presented all the symptoms of approaching collapse. Vertex presentation. Os dilated to size of fifty cent piece, and a small segment of placenta overlapping. Dr. N. immediately separated placenta, ruptured membranes, gave a teaspoonful of ergot by mouth, and a syringeful hypodermically. Head was pressed down, pains increased in intensity, and hæmorrhage ceased. The case was left to nature—the mother’s strength being husbanded by large draughts of warm milk. Child born in two hours, and is still living. The mother recovered very slowly, but without any untoward event.

In the above three cases all the mothers lived. In the first case, delay in giving anæsthetic and delivering nearly cost the patient her life; in the second case, he temporized too long. In placenta prævia we have a condition which commands the accoucheur to act in the living present.

To Turn Out Succulated Stones into the Cavity of the Bladder.

Mr. Reginald Harrison (according to *International Journal of Surgery*, August, 1891,) states that Peterson’s rectal bag, distended with two or three ounces of water, is useful. This also prevents lodgment of fragments during lithotrity.

Aniline Chloride Injections for Carcinoma, Epithelioma, etc.

Dr. C. E. Bruce is using (*South. Med. Record*, Sept., 1891,) injections of aniline chloride in cases of carcinoma and epithelioma in the Almshouse, Blackwell's Island, New York city, with very satisfactory results. One patient, with epithelioma of the tongue, infiltration of the sub-maxillary glands, and a fixed condition of the muscles of the jaw, so as to render mastication impossible, was placed upon injections of ten minims of a ten per cent. solution of aniline chloride; within three weeks the glandular infiltration subsided so that he was able to thoroughly masticate his food. The infiltration surrounding the epithelioma was diminished so that deglutition of solid food was not only possible, but even comfortable.

In a case of carcinoma of uterus, where the infiltration of the uterine tissue was great, and the os so swollen that it was hardly possible to get it within the opening of the bivalve speculum, within a month, under this treatment, the induration had been reduced to the size of a silver dollar; the general condition of the patient was good; she had increased in flesh and strength, and experienced no further pain or discomfort. Previous to going under treatment, she had been in the habit of passing great quantities of blood from the vagina, but this has given place to a thin, watery, colorless discharge. She now feels very comfortable, and is relieved from all her distressing symptoms.

Treatment of Abortion with Retained Placenta.

Dr. Chas. Enfield says (*Vis Medicatrix*, August, 1891,) that the advantages of manipulation in the Sims' position, in any operation upon the uterus must have suggested a substitute for the old operation of finger extraction for the removal of the retained placenta. Gynæcological work has suggested to Dr. Enfield the method of removal by the dull curette. The condition is analogous to the curetting operation for fungous endometritis, and the operative technique is essentially the same. It consists in placing the woman upon the table in the semi-prone position, retracting the perineum, seizing the cervix by the tenaculum, the use of a branching dilator if necessary, and the systematic employment of the dull wire curette. Subsequent irrigation of the uterus by the hot-water douche, and the patient can be carried to bed. Its advantages are—avoidance of further hæmorrhage, and of septicæmia, because the uterus is efficiently and thoroughly emptied. In the old method, there is not sufficient

freedom of movement for the finger to detach, and hook down; and in those cases where the os has closed after expulsion of the ovum, the tiresome waiting for the dilating action of the vaginal tampon is avoided. He brings this method forward on account of its merit. In three cases of accidental miscarriage in his practice during the past month, a subsequent visit was unnecessary, so well had the curette done its work. The method does not seem to be extensively practiced.

Lusk, Playfair, and Barnes, make no mention of the curette. Cazeaux mentions it as an alternative, and Grandin (*Cyclop. Obstet.*) advises it, calling it Mundé's method. Dr. Mundé advises a uterine tampon containing a styptic, as a final measure, but in the average case this does not seem to be necessary. However, if hæmorrhage should persist, packing the uterine cavity with a long strip of iodoform gauze would be, perhaps, preferable to the cotton pledgets soaked in iodine tincture.

Southern Pines, N. C.—The Ideal Resort for Consumptives.

Dr. Wm. C. Wile, of Danbury, Conn., after a thorough personal examination into the merits of the subject (in a recent issue of the *New England Medical Monthly*), states that the ideal resort for a patient with lung diseases should be—(1) located on high ground; (2) drainage perfect; (3) temperature even; (4) rainfall small, and the water speedily absorbed by the ground, so that as little moisture as possible shall be held by the surface; (5) dry and pure air; (6) a place that will afford rest and quiet; and (7) the surroundings must be of a character to preclude everything which will interfere with sleep; (8) water must be pure and wholesome; (9) good hotels and nourishing food; (10) an atmosphere laden with balsamic odors of the pine tree. All of these requisites, he claims, are to be found at Southern Pines, Moore county, N. C.

The late State Geologist of North Carolina, W. C. Kerr, says of this place, which is about 50 miles south of Raleigh, that its winter climate is sufficiently mild for a very large class of invalids who now go to Florida or Aiken; that it has the most perfect drainage possible, being a high sand-bank; that its elevation (of 600 feet) is much greater than any similar pine woods region; that being within the sweep of the influences of the Gulf Stream, its climate is mild and equable; that being in the midst of a forest of long-leaf pine, the atmosphere exercises a beneficial and curative in-

fluence in all affections of the air-passages; and that it is within only about twenty hours of New York city. The hotels are good, and the cuisine generous and plain.

Sulphonal to Control Spasm and Pain—Rectal Surgery.

Dr. Charles C. Allison, of Omaha, Neb., says (*Med. Mirror*, Sept., 1891,) that Dr. Ap. Morgan Vance, of Louisville, called his attention to sulphonal as a useful agent in controlling muscular spasm, especially when of traumatic origin. Availing himself of the hint, Dr. Allison used the drug in his rectal cases, where stretching of the sphincter and levator muscles was necessary, with the most gratifying results. The involuntary spasm and excruciating pain prone to occur when the patient awakens, or makes an effort to change his position, is entirely controlled in the following manner: When pain is expected from the temperament of the patient or nature of the operation, a hypodermic of morphia and atropia is given during the reaction from the anæsthetic; and in the evening administer twenty grains of sulphonal. Repeat this the following morning, if demanded by spasm and pain; generally, however, twenty grains given in the evening of the first three or four days subsequent to the operation insure good rest, and freedom from pain during the day.

Recent observations affirm the drug to be useful in chor-dee, asthmatic paroxysms, hiccough and trismus neonatorum, and in these indications spasm is combatted.

Dr. Allison's use of the drug has been confined to rectal cases in which irritation has been minimized by aseptic measures, including the canula-tampon, or rubber tube wrapped with iodoform gauze, which makes an effective aseptic dressing, and allows of escape of gas. The results may be summarized as follows: (1.) Muscular spasm and lancinating pain are entirely eliminated. (2.) Retention of urine has not been met in a single case, since pain and spasm are controlled; and (3.) Opiates are unnecessary, their damaging effects upon the secretions and kidneys being avoided.

Campho-Phenique and Chloro-Phenique.—Dr. Beverly D. Harrison, of Sault Ste. Marie, Mich., in *Medical Age*, June 25, says: "As parasitocides and antiseptics, they are, in my experience, without rivals." And then he proceeds to enumerate numerous every day uses of these preparations where they prove superior to other agents. The Phenique Chemical Co., of St. Louis, will send reprints on application.

Treatment of Whooping Cough.

According to *Archives of Pediatrics*, September, 1891, the following are the present plans adopted in Europe.

Scilla oxymel.—Since Dr. Netter re-introduced this treatment in 1886, it has been constantly used in children's hospitals in France as well as in private practice. It certainly diminishes the number of attacks of cough and makes them shorter in duration. Expectoration is made more abundant and more fluid, while vomiting is soon stopped, so that it is claimed to be the *best known treatment*. It is given in twenty- to sixty-drop doses to babies. In older children five to six tablespoonfuls is given between five and six P. M., and no food is given from three to seven P. M. This is another return to an old medicine—oxymel scillæ having often been used in old times as a good expectorant in bronchitis, etc.

2. *Quinine*.—Binz used quinine years ago. Now Megar, of Bonn, takes it up. He gives large doses.

3. *Antipyrin* is the English idea. Dr. Crozier Griffiths believes that antipyrin only fails when not given in large doses, and finds that children stand them well. A baby of four months was given one-half grain every three hours, and on the fourth day, there being no improvement, he gave one grain every three hours, and in forty-eight hours the child was well.

4. *Infusion of thyme* seems also to be an efficacious remedy (twenty grammes of thyme to one hundred and fifty grammes of boiling water). This is sweetened with syrup of tolu, and six to ten tablespoonfuls are given daily according to age of child.

5. *Essence of eucalyptus comp* is a mixture of six grammes of essence of eucalyptus and an equal quantity of essence of turpentine in forty-five grammes of alcohol, and is used by *inhalation* half an hour before each meal and at night. It is claimed to have cured whooping cough.

6. *Chloral* is used only in those cases where there is no bronchial troubles, and but little expectoration.

Dioiburnia is pronounced by the most prominent professors of medicine as being the most powerful uterine tonic attainable. It is the remedy to right the wrongs and relieve the weakness of the uterus and appendages. It resuscitates to normal condition. It is a sure remedy to prevent miscarriage, also nausea in pregnancy, restoring the entire uterine system—relieving all abnormal conditions of same.

Treatment of Intractable Neuralgia.

The Editor of the *Times and Register*, Sept. 26, says that the severer forms of neuralgia require, for their successful management, the regulation of the personal and domestic hygiene to the minutest detail. Since Austie wrote, the dependence of neuralgia on the eyes has been brought prominently forward; and these organs should be examined, and any imperfection corrected. We have also remedies to break up the paroxysms that Austie did not know; in fact, better than any he possessed; in antipyrine, acetanilide, and phenacetine. Either of these should be given a trial. In one case, we recently obtained the best results from antikamnia, in doses of two grains every half hour. These may be alternated with chloral, in scruple doses; as all remedies for the paroxysm lose their virtue when employed too often. For the intervals give cod-liver oil, and the following:

R _x .—Phosphori.....	gr. $\frac{1}{89}$.
Strychninæ sulph.....	gr. $\frac{1}{40}$.
Acidi arseniosi.....	gr. $\frac{1}{20}$.
Pil. ferri carb.....	gr. iiij.
Ext. aloes.....	gr. $\frac{1}{8}$.

M.—S. In pill, thrice daily.

In one week drop out the phosphorus, and add a grain of quinine. If any of the other ingredients disagree, replace it by gold, silver, hydrastine, or capsicum. But keep up the reconstructive tonic medication persistently for months. At the menstrual periods, give some uterine stimulant, as viburnum, cypripedium, or scutellaria. These, with careful avoidance of the exciting causes, will succeed in curing any neuralgia that is curable by strictly medical means.

Therapeutics of Indian Hemp.

Dr. Suckling says that in *insanity in women*, due to mental worry or moral shock, Indian hemp acts almost like a specific. He usually gives ten minim doses of the tincture three times a day, combined with iron and strychnine. He has also found it of great value in *mania and melancholia*, and in cases of *chorea* where arsenic fails; in such he combines it with hydrate of chloral. In *migraine* it is also useful, given with or without phosphide of zinc, when the severity and frequency of the attacks will be immediately diminished. It is also a valuable gastric sedative in cases of *gastric ulcer and gastrodynia*.—*Brit. Med. Jour.*, July 4, 1891; *Practit.*, August, 1891.

Prolapse of the Ovary.

Alexander Duke, F. R. C. P. I., etc., of Dublin, says (*Satellite*, Sept.), that the commonest form of prolapse of the ovary, and that which gives the most trouble, as a rule, is backward and downward into Douglas's space, and is most frequently found in conjunction with retroflexion or retroversion of the uterus. The enlarged ovary, either from structural diseases or others, becomes congested or tumefied, more especially at or near a period; and a sudden fall, or any violent exertion, with a lax condition of the broad ligament, allows that organ to sink by degrees till the pain produced by the action of the bowels (more especially when allowed to become confined) is generally the first thing to direct the patient's attention to the complaint, and sooner or later compels her to seek relief. Byford states: "The intimate and firm ligamentous connection of the ovaries with the fundus of the uterus causes them to partake of the changes in the position of that part of the organ. Thus, when the fundus rises into the abdomen, during pregnancy, the ovaries are carried up with it."

When of some duration, the ovary will easily be detected by the pain and feeling of sickness, when touched or pressed by the finger, and which always makes the diagnosis unmistakable. When the prolapsed organ is held down by adhesions or a retroflected uterus it is difficult to treat the case satisfactorily.

This affection is frequently overlooked, the flexion or version diagnosed only, and a pessary introduced, which as Byford says, "is pretty sure to cause pressure upon these sensitive organs, and soon becomes intolerable." Examine most closely, in *all cases* of retroflexion (especially of long standing), for a prolapsed ovary before inserting a pessary, which may add to the patient's distress, and bring discredit on a valuable instrument. Examination *per rectum* is most important; the ovary can be more distinctly felt, as the examining finger can reach higher, and the organ itself palpated by a finger in both passages if necessary. In these cases, place the patient in the knee-elbow or knee-chest position, the vagina being kept open by the duck-bill speculum, gravitation of the uterus forward, assisted considerably by atmospheric pressure on vaginal roof, will (if the ovary be not borne down by adhesions) move upward and out of reach of the examining finger.

If a Thomas pessary (the one preferred) be chosen of suitable size, and placed *in situ*, so as to fill the roof of vaginal

posterior *cul-de-sac*, the ovary cannot possibly regain its vicious position; and, by keeping the bowels regular and restoring the general tone as much as possible by common-sense treatment, the patient will certainly be relieved, if not cured.

When the ovary is bound down by firm adhesions which will not give way under massage, and life becomes a burden, consider the removal of the organ, which, as a rule, is not a difficult operation, easy access being had through the posterior fornix. The organ being caught and drawn down by ovum forceps, a ligature is passed around the pedicle and tied, and a scissors completes the removal. The incision should be left open for drainage; there is no necessity for sutures. The vagina should be well syringed with a hot antiseptic solution after the operation, and the rest left to nature.

Recent Recipes for Gonorrhœa.

Brindisi (*Rev. Gen. de Clin. et de Therap.*) employs the following antiseptic injection:

R_x.—Antipyrin gr. xlv.
Sulphate of zinc..... gr. iv.
Rose water.
Cherry-laurel water.....āā ʒij. Mix.

[Antipyrin solutions—about 2 per cent.—are commonly used in Richmond.]

Dr. William B. Dewees, of Salina, Kan., says (*Kan. Med. Jour.*) few cases will remain uncured after eight days' use of injection of

R_x.—Sodium biborat.
Resorcināā ʒss.
Glycerinʒiiss.
Rose water, q. s.....ʒviiij.

M.—S. Inject ʒij every two hours the first day; then lengthen intervals as the discharge lessens. After third day, take internally, tincture *Canabis indica*, 5 drops every three hours. Bathe glans penis in as hot water as can be borne three times daily.

Dr. Richard Lee (*Intern. Surg. Jour.*, August, 1891) first uses warm injections of sodium biborate and morphia [sulph.] (in glycerin and rose water) for three days; and then *aristol* in liquid vaseline—25 grains to ounce. Prompt relief, without relapse, was effected in from four to six days.

Treatment of Kidney Diseases.

Dr. Francis Delafield, of New York, in concluding a valuable contribution (in *Amer. Jour. Med. Sci.*, October, 1891,) says:

Acute congestion of the kidneys can be relieved by the application of heat to the surface of the body.

Chronic congestion is best managed by drugs which stimulate the heart and dilate the arteries.

We evidently have no means at our command by which we can influence *acute degeneration* of the renal epithelium; fortunately the great majority of the cases of acute degeneration are not serious.

Chronic degeneration also seems to be a condition which we are unable to treat.

In *acute exudative* and in *acute diffuse nephritis* the main indications for treatment are to diminish the severity of the nephritis and to regulate the circulation. To diminish the severity of the nephritis, we employ cups over the lumbar region, heat over the lumbar region or over the entire body, and the internal use of calomel, sulphate of magnesia, opium, aconite, or digitalis. The disturbances of the circulation are largely the causes of the cerebral symptoms and of the dropsy. With a laboring heart and contracted arteries, we employ the drugs which dilate the arteries—chloral, hydrate, opium, nitrate of amyl, and nitro-glycerin—or we diminish the quantity of the blood by venesection, sweating, or purging. With a feeble heart and relaxed arteries we use the cardiac stimulants.

In *chronic nephritis* climate and mode of life constitute the important parts of treatment; it is doubtful if drugs exert any effect on the nephritis. A warm, dry climate, and out-of-door life are of the greatest importance. Medical treatment can, however, be employed with advantage for the relief of the anæmia, the dropsy, and the disturbances of circulation.

Strontium Salts in Chronic Rheumatic Gout.

According to *La Tribune Medicale*, July 30th, M. Sée had used only strontium bromide which is perfectly innocuous. Vulpian, in 1876, proved that strontium salts are well borne in large doses. He had witnessed marked improvement in chronic rheumatic gout after the use of strontium bromide. M. Paul remarked that strontium lactate is well borne in daily doses of 6 to 10 grammes (3iiss—iiss), and that it favorably influenced abdominal plethora and chronic Bright's disease.

Amenorrhœa.

The following is recommended as a reliable emmenagogue in many cases of functional amenorrhœa:

R.—Bichloride of mercury,
 Arsenite of sodium.....ãã gr. iij.
 Sulphate of strychnine gr. iss.
 Carbonate of potassium,
 Sulphate of iron.....ãã gr. xiv.

Mix and divide into 60 pills.

Sig. One pill after each meal.

—*Revue de Medi.-Chir. des Mal. des Femmes.*—*Times and Register*, Sept 26.

Antipyrin and Bromide of Ammonium in Epilepsy.

Dr. H. C. Wood suggested the use of antipyrin and bromide of ammonium in combination. Dr. C. S. Potts states (*Univ. Med. Mag.*) that this mixture has been used with excellent results in 43 cases of idiopathic epilepsy. In none did it fail to cause marked amelioration of the symptoms, and in some it gave relief when all the other commonly-used remedies had failed, and in none were any indications of bromism present, or any of the other disagreeable symptoms which antipyrin sometimes gives rise to.—*Therap. Gaz.*—*Abstr. & Index*, Sept. 15, 1891.

Ipecacuanha to Increase Labor Pains.

Drapes (*Les Nouv. Remèd.*) affirms that ipecac, in the form of wine of ipecac, in the dose of ten to fifteen drops, repeated every ten minutes, constitutes a powerful remedy to provoke strong contractions of the uterus in a case of uterine inertia, or rigidity of the cervix, which threatens to indefinitely prolong the labor. After the second or third dose, strong uterine contractions will come on, will repeat themselves at regular intervals, and tend to rapidly bring the labor to an end. That which makes ipecac in this condition superior to ergot of rye is that it never provokes tetanic contraction of the uterus, so frequent after the administration of ergot.—*Med. News—Canada Med. Rec.*, Aug., 1891.

The Three Chloride Elixir man of Louisville recently left us a sample of this widely-indicated alterative tonic. After lecturing us on the activity of iron, arsenic and mercury, he wended his way to the next office to tell that doctor what he ought to have known before of the special virtues of this preparation. We hope he will now prescribe it.

Book Notices.

Practical Pathology and Morbid Histology. By HENEAGE GIBBES, M. D., Professor of Pathology in University of Michigan, etc. Illustrated with Sixty Photographic Reproductions. Philadelphia. Lea Brothers & Co. 1891. Cloth. 8vo. Pp. 320. (From Publishers).

This work is valuable to student and practitioner alike in that it shows them with what to provide themselves in undertaking pathological and historical investigation, describes the details of procedures, defines what is revealed by the examination, and announces the disease to which the pathological specimens belong. It further shows the student how to preserve the impression brought to light by the microscope, etc., for future study or reference. In short, it is a *practical text-book*—useful in the laboratory, the doctor's office, and as a general work for consultation in all matters pertaining to pathology and morbid histology. An improvement in the next edition would be a better index. For instance, so common a word as diphtheria is not named in it; and yet the membrane is described on page 209, etc.

Dermatological Bibliography. Compiled by GEORGE THOMAS JACKSON, M. D., of New York. Presented to American Dermatological Association, 1891, and issued as part of Transactions for 1890. 8vo. Pp. 91. Paper.

This is intended for a catalogue of books—not of journal articles—on syphilis and skin diseases to remove embarrassment in ordering from catalogues of second-hand books, etc. It is useful to those in search of the literature on the subjects referred to.

Vacation Time, with Hints on Summer Living. By H. S. DRAYTON, M. D. New York. Fowler & Wells Co., Publishers. 1891. Paper. Demi 8vo. Pp. 84. Price 25 cents.

We regret not to have received this monthly issue of "The Science of Health Library" in time for the favorable notice we would have given it so as to have been of service to those who have about spent their vacations at Springs, Summer resorts, etc. It contains useful suggestions, and many odds and ends of valuable information as to summer recreations, etc.

Short Manual on Analytical Chemistry, Qualitative and Quantitative—Inorganic and Organic. By JOHN MUTER M. A., Ph. D., F. R. S. E., etc., Analyst to Metropolitan Asylum Board, etc. First American, from Fourth English Edition. Edited by CLAUDE C. HAMILTON, M. D., Ph. G., Professor of Analytical Chemistry in University Medical College of Pharmacy, etc. Philadelphia. P. Blakiston, Son & Co. 1891. Cloth. 8vo. Pp. 204. Price, \$2. (From Publishers).

This is the Manual of Chemistry for medical men and pharmacists. It is arranged on the principle of the course of instruction given at the South London School of Pharmacy. It pre-supposes, of course, a good elementary knowledge of the processes of chemistry. Its directions are synoptical, but are yet so much in detail that it is easy to understand and to apply the tests—either for qualitative or quantitative examination. It shows how to detect unknown salts, alkaloids, glucosides, certain organic bodies used in medicines; gives toxicological procedures, processes for analyses of water, air, food, drugs, urine, calculi, gases, etc., etc. The work is standard among authorities, everywhere; is practical in details, simple in its methods, and is the chemical book for doctors and pharmacists.

The Pocket Anatomist. *Founded upon Gray.* By C. HENRI LEONARD, A. M., M. D., Professor Medical and Surgical Diseases of Women and Clinical Gynæcology Detroit College of Medicine. Fourteenth Revised Edition, containing *Dissection Hints and Visceral Anatomy*. Detroit, Mich., 1891. The Illustrated Medical Journal Co., Publishers. Cloth. 297 pages; 193 illustrations. Price, postpaid, \$1.

This book is issued on thin, nicely glazed paper, and takes up but little room. The plates are photo-engraved from the English edition of Gray, and are, therefore, exact; most of them are full-paged, and are grouped together so as to save as much thumbing as possible. The "questions" are absent in this work, and their room given to illustrations or terse descriptions of the minor parts found in the several dissections. The chapter on "dissection hints" gives the lines of incision necessary to best expose the underlying organs, arteries, etc. The chapter on Gynæcological Anatomy is found only in the more expensive work of Savage. The pronunciation of each anatomical term is given. Over 100 pages are devoted to the anatomy of the special organs and viscera. The book has been reprinted in England after some three thousand copies had been sold over there by the American publishers.

Surgical Treatment of Wounds and Obstruction of the Intestines. By EDWARD MARTIN, M. D., Professor of Operative Surgery, University of Pennsylvania, etc., and H. A. HARE, M. D., Professor of Therapeutics, Jefferson Medical College, etc. Philadelphia. W. B. Saunders. 1891. Cloth. 8vo. Pp. 169. Price, \$2. (From Publishers).

This is the Prize Essay awarded by the trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, June, 1890. The essay is based upon laboratory experiments by the authors, conducted during a term of two years, who carried out with every detail all the methods and modifications of operations that have been published, or which occurred to them in the course of their studies. On examining this book, the title is apt to mislead; for the casual examiner is apt to suppose that the Essay treats rather of traumatisms than of diseases, whereas, beyond the twenty pages of tabulated "cases of cœliotomy for gunshot wounds of the abdomen, chapters xiii and xiv, covering only about 22 pages, treat directly of *wounds* of the intestines. The subjects discussed in the twelve succeeding chapters, and taking up over 100 pages, are such as the *general practitioner* is liable to meet at any time, namely, intestinal obstruction, congenital malformations, intussusception, internal strangulation, volvulus, obstruction from foreign bodies (articles swallowed, and such things as gall stones, concretions, etc.), intestinal paralysis, chronic obstruction, the general and the special treatment of intestinal obstruction, etc. Thus the work is as useful to the physician as to the surgeon, and it assuredly is indispensable to the surgeon.

Index-Catalogue of the Library of the Surgeon-General's Office, U. S. Army. Authors and Subjects. Vol. XII (Reger-Shuttleworth). Washington. Government Printing Office. 1891.

This volume includes 20,251 author titles, besides 6,603 subject titles of separate books and pamphlets, and 18,956 titles of articles in periodicals contained (alphabetically) between the words "Reger" and "Shuttleworth." It has been prepared under the supervision of Surgeon John S. Billings. As this well-prepared *Index* approaches completion, its great value becomes more and more manifest to him who seeks a bibliographical record relating to any medical subject.

Clinical Text-Book of Medical Diagnosis for Physicians and Students, Based on the Most Recent Methods of Examination. By OSWALD VIERORDT, M. D., Professor of Medicine at University of Heidelberg, etc. *Authorized Translation from the Second and Enlarged German Edition, with Additions.* By FRANCIS H. STUART, A. M., M. D., of Brooklyn, N. Y. With 178 Illustrations, many of which are in colors. Philadelphia. W. B. Saunders. 1891. 8vo. Pp. 700. Sheep, \$5; Cloth, \$4, (From Publishers).

It is unfortunate that a work of such excellent virtues should require a full page of "errata." Otherwise it is one of the finest issued of medical books. As a text-book or book for consultation by the busy practitioner, it is the best of monographs on medical diagnosis. It does not undertake to describe a disease and tell its differential diagnosis; but it describes morbid conditions, signs, symptoms, etc., and points out to what disease those morbid conditions, signs, symptoms, etc., belong. In other words, it takes the patient as he is, and translates his symptoms, signs, etc., so that the practitioner can read out their meaning, and thus build up his diagnosis. A most excellent index is appended (covering 91 pages) which, it is believed, comprises reference to every material statement in the book. It so often happens that the physician at the bedside is puzzled in the interpretation of the morbid conditions he meets with. A proper use of this book will help him. Our advice to every practitioner is to get this work and read it thoroughly, and afterwards consult it frequently.

Action, Therapeutic Value and Use of the Carlsbad Sprudel Salt (Powder Form), and its Relation to the Carlsbad Thermal Water. By DR. W. JAWORSKI, Demonstrator at the University of Krakow. *With a Dietary* by the Translator, A. L. A. TOBOLDT, M. D., Assistant Demonstrator of Pharmacy, University of Pennsylvania, etc. Philadelphia. P. Blakiston, Son & Co. 1891. Cloth. 8vo. Pp. 100. (From Publishers).

Sprudel salt is becoming so popular a remedy for various gastro-intestinal disorders, that such a thorough book as this on the subject—covering every detail of manufacture, administration, doses, uses, etc.—cannot fail to be in demand. This work is founded on clinical and experimental researches made at the University Clinic of Prof. Korczynski, in Krakow. To the general practitioner, the volume is made much more useful by the introduction of the Dietary of the Translator, supplemental to the one in the body of book, for a number of diseases, such as gastric catarrh, gastric ulcer, dyspepsias, gout, diabetes, etc.

Text-Book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By HOBART EMORY HARE, M. D., B. Sc., Professor of Therapeutics and Materia Medica in Jefferson Medical College, of Philadelphia, etc. Second Edition. Enlarged and Thoroughly Revised. Philadelphia: Lea Brothers & Co. 1891. 8vo. Pp. 658. Cloth. (From Publishers.)

The wonderful popularity of "Hare's Therapeutics," as attested by a demand for this second edition in a little over half a year after the issue of the first, is proof that we were not wrong in placing so high an estimate as we did in noticing the former edition (November number, 1890.). The author has availed himself of the opportunity presented him to make the few corrections proper in the first edition, and to add some sections on subjects not formerly discussed—such as the method of employing the "rest-cure;" suspension in the treatment of locomotor ataxia and allied affections, etc. A number of new drugs have also been discussed and a large number of new prescriptions have been added. The book is divided into four Parts. Part I gives a series of general therapeutic considerations. Part II—about 280 pages—describes drugs, their preparations, etc. Part III—about 40 pages—considers remedial measures other than drugs, foods for the sick, etc. Part IV takes up over 300 pages, and gives the therapeutic application of remedies to diseases, besides tables of doses and remedies, relative weights and measures in the metric and apothecaries' systems, index of drugs and remedial measures, index of diseases and remedies, etc. If the practitioner failed to get the first, he should not fail to have this edition, as it will be of daily use to him.

Annual of the Universal Medical Sciences—a Yearly Report (1891) of the Progress of the General Sanitary Sciences Throughout the World. Edited by CHARLES E. SAJOUS, M. D., and *Seventy Associate Editors*. Assisted by *Over Two Hundred Corresponding Editors, Collaborators, and Correspondents*. Illustrated with Chromo-Lithographs, Engravings, and Maps. In Five Octavo Volumes, of over 500 Pages each. Cloth. \$15 for the Five Volumes. Half Russia, 820. For sale by subscription. 1891. F. A. Davis, Philadelphia. (From Publisher.)

Death and sickness in the ranks of assistant editors, etc., delayed the publication of this *Annual* until a few weeks ago. The preceding issues, however, have established the

claim it has upon the profession as being the best *exposé* of the advances made in each of the departments of medicine during the year. So that the practitioner who allows himself to go without a set of this *Annual* will soon find himself much "behind the times." It is an essential, as we regard it, to every practitioner's library. A proper review of such a work as this is impossible within the limits allowed book notices. But as the Index gives specific references to the subjects, the author, and book or journal containing his contribution, it is easy to trace the correctness of the statements made. The indices of authors, subjects, etc., named in the five volumes, is a model of perfection—covering 72 pages, triple columns. So that if any advance was made during 1890 in any department, it only requires an examination of the General Index to see its general nature, while the page references, so far as we have been able to see, are accurate. In this issue of the *Annual*, a practical improvement has been made by adding a list of the authorities quoted to each of the volumes.

Minor Surgery and Bandaging, including the Treatment of Fractures and Dislocations, Tracheotomy, Intubation of the Larynx, Ligations of Arteries, and Amputations. By HENRY B. WHARTON, M. D., Demonstrator of Surgery, and Lecturer on Surgical Diseases of Children, in University of Pennsylvania, etc. *With 403 Illustrations.* Philadelphia: Lea Brothers & Co. 1891. Demi 8vo. Pp. 497. (From Publishers)

The full title above given defines the scope of this new work, which must take a first rank as soon as examined. Bandaging is well-described by words, and the methods are illustrated by photographic drawings, so as to make plain each step taken in the application of bandages of various kinds to different parts of the body and extremities—including the head. The various applications are likewise described and illustrated, so that it would seem easy for the tyro to do the gravest amputation. The various established operations are described in detail, etc. Hence this work on Minor Surgery, etc., becomes a most valuable companion-book to any of the more pretentious treatises on Surgery, where simply the general advice is given to bandage, amputate, intubate, operate, etc. For the student and young surgeon, it is a very valuable instruction-book from which to learn how to do what may be advised, in general terms, to be done.

3,000 Questions on Medical Subjects. Arranged for Self-Examination, with the Proper References to Standard Works in which the Correct Replies will be Found. Philadelphia: P. Blakiston, Son & Co. 1891. Cloth. 32mo. Pp. 144. (Price, 10c. in postage stamps.)

This is a first-rate idea, and an exceedingly useful publication. It makes self-examination a pleasure, as it always is profitable. On the left-hand page the questions are asked, and direct references are made to the book and page where the answers may be found. The right-hand page is blank for any memoranda that may be required. It is the very thing for reviews—whether by the lecturer or student. And then an item of great importance is that it will be mailed by the Publisher to any address of a medical student on receipt of only ten cents in postage stamps.

Pulmonary Consumption a Nervous Disease. By THOMAS J. MAYES, M. D., Professor of Diseases of the Chest in Philadelphia Polyclinic and College for Graduates in Medicine, etc., 1891. George S. Davis, Detroit, Mich. Pp. 185. Price, 25 cents. (From Publishers.)

This is an unusually interesting issue of the "Physician's Leisure Library"—especially at this time when the bacillary origin of consumption is alone being considered as the cause of the disease. In the department of Analyses, etc., we present a reprint of the conclusions ingeniously arrived at by the author.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Surgery, Gynæcology, etc. By PROFESSORS IN THE LEADING MEDICAL COLLEGES of the United States, Great Britain, and Canada. Edited by JOHN M. KEATING, M. D., Philadelphia; J. P. CROZIER GRIFFITH, M. D., Philadelphia; J. MITCHELL BRUCE, M. D., F. R. C. P., London, England; DAVID W. FINLAY, M. D., F. R. C. P., London, England. *July, 1891.* Philadelphia: J. B. Lippincott Company. 1891. 8vo. Pp. 356. Cloth. \$11 a year (four quarterly volumes). Half Leather, \$12. Sold only by subscription, From Publishers.

This Volume opens with a life-like engraving and a biographical sketch of Dr. Joseph Leidy. Then follow thirty-nine lectures—all practical, and some illustrated by drawings—on well-selected subjects, and each by worthy lecturers. In our June number, 1891, we gave so full a sketch of the plan of these "Clinics," that it is not necessary now to repeat our commendatory notice of the Series. The sub-

jects considered by the authors cover every department of practice; so that the specialist, as well as the general practitioner, will find profit in subscribing and reading up each of the lectures. Most cordially do we commend these "International Clinics."

Editorial.

Diphtheria About Richmond.

For the past two months, diphtheria has been prevailing so extensively and so fatally in certain portions of Virginia as to cause alarm in many centres, and to make it a matter of concern to the profession. In this city and within a radius of a few miles around, there have been perhaps as many as 200 cases of the disease within the period named, and, as nearly as we can estimate it, the mortality has been about 30 per cent. In this number, there have been relatively few cases of the croupous form suggesting the need of intubation or tracheotomy; but the virulence of the poison has spent its effects for the most part upon the nervous system. The fatal cases have generally been those having remarkably slow pulses, and weak and irregular heart beats from an early stage of the disease that have resisted the usual effects of stimulants, which seemed indicated from the beginning. The facts stated in the paper by Prof. Dabney in this issue of the *Monthly*, with reference to the grave prognosis as made out by the slow pulse, etc., will find many illustrations in the records of cases seen in this city during the present prevalence of diphtheria. The facts noted were likewise observed during the endemic about Bartonsville (about a mile from Richmond) during 1890.

The statistics of the Richmond Board of Health are quite reliable, so far as the cases occurring within the city limits are concerned, but do not include cases occurring outside of city lines—cases, however, which must stand as menaces to the people of the city, because of the constant business relationships, etc., of the persons residing in the houses occupied by the afflicted families with the citizens themselves—many of whom adopt no means of prevention.

The Public Schools of the city were to have opened on

September 15th, but on account of the prevalence of diphtheria, their openings were postponed until September 28th, when, in reality, the disease was as much epidemic as on the first-named day. It remains to be seen what the result will be. We are assured, however, that the principals and teachers—in all about 300—have been instructed as to precautionary measures, and have been given authority to act in any case where there appears to be a grounded suspicion or a reasonable apprehension. No pupil who has recently had the disease, or who has recently been in a family where there are or were cases of diphtheria is to be admitted, unless the certificate of his or her physician indicates that it is safe to admit the pupil. The principals and teachers are thus practically constituted emergency health officers; and it is to be hoped that they will exercise their powers with such judicious precaution as not to permit even doubtful carriers of disease to enter their school rooms.

The health authorities have done all they could, in a public way, to lessen the spread of the disease. Lots have been inspected; water closet arrangements, etc., have been condemned; garbage and filth have been removed from premises and alleys; wild grass has been cut from the streets; lime and disinfectants have been scattered in gutters, down sewers, etc.; and yet new cases break out with about the same daily rate as before these things were done—from two to four new cases a day. It is hard to say whether or not such measures as above have had any effect in lessening the number of cases, or has made them milder. Undoubtedly all of these are essential to break up an epidemic of diphtheria. But beyond any and all of these things, the surest means of prevention where absolute segregation is impracticable is the thorough personal use of an agent that will destroy the Klebs-Löffler bacillus. V. Babes' experiments with various agents showed that solution of corrosive sublimate, 1:4,000; or of potassium permanganate, 1:1,000; or of alcohol, 1:5; or of chloral, 1:50; or boracic acid, 1:20 prevent the formation of the diphtheritic pellicle, and do not irritate. These solutions are to be used, by those liable to exposure to the disease, as frequent gargles—every two or three hours—or by atomizers, etc., so as not to let the dose of the medicine itself prove toxic. Thus, if the corrosive sublimate solution be used, estimates should be made so as not to let the total amount of spray of nostrils, fauces, pharynx, etc., in a child of from two to five years of age ex-

ceed one-fortieth or one-thirty-second of a grain. A preparation which is largely used in this community, and with great confidence by the profession, both as a prophylactic and in the treatment of diphtheria, is known as "chloral-thymol"—the name indicating its essential components. It is prepared by Mr. Hugh Blair, of this city. It is practically non-toxic, and is used as a spray, as a gargle, or mouth wash, etc., and has a pleasant odor. It does seem to be a fact that the disease has not broken out in but one instance where the preparation was freely used, according to directions, and in that one family it is possible that the agent was not properly used. Of course this personal protection involves likewise the use of the spray, etc., upon suspected articles apt to be handled or worn by the party—such as clothes, etc. Doctors, nurses, etc., should be careful not to be carriers of the bacillus from one patient to another by adopting the measures of prevention for themselves which they recommend to others.

The reports in the daily papers indicate that diphtheria this winter will be a wide-spread epidemic. It is already the "prevailing disease" in a number of cities of the Continent.

We would suggest that practitioners apt to come in contact with the disease should at once carefully read up on the decided advances made during 1890, in the study of diphtheria as brought out in the *Annual of Universal Medical Sciences*, 1891, Vol. I., Section J.

Medical Society of Virginia.

The Session in Lynchburg to begin at 8 P. M., October 6th, and continue through the night of 8th, promises to be of unusual interest. The addition to the membership will probably be the largest ever made at any one session since it met in the same city in 1871. The class of papers stated in the recently issued Announcement shows at a glance how valuable the session will be in a scientific sense; while the ability of the authors and the distinction of the visitors to be in attendance, etc., must convince any one of the high position the Medical Society of Virginia occupies in the esteem of men distinguished in the profession the world over. The social features of the occasion will no doubt be all that could be desired. A matter of great interest, especially to the country practitioners, will be the Exhibition of pharmaceutical products, surgical instruments, appliances, etc.

"Traveling men" for the manufacturing houses are constantly in the cities, going from one doctor's office to another, exhibiting such things; but they have no way of reaching the village and country doctor, except on such occasions as the meeting of the State Society, when they come prepared with samples of their full line.

The Essays received for Dr. Hunter McGuire's Prize have been handed over to the Special Committee for examination. Dr. Joseph Tabor Johnson, of Washington, will present a paper not announced in the circular; and the State Board of Medical Examiners, through one of their members (Dr. Rawley W. Martin, of Chatham, Va.), will present a report on the Mission and Results of the Medical Examining Board of Virginia.

Polk Miller & Co.'s Surgical Instrument Department.

It has often surprised us that no house in Virginia has steadily undertaken to develop a full surgical instrument trade. Instruments have been considered an altogether secondary matter in many drug stores. But now Messrs. Polk Miller & Co., of Richmond, have gone into that trade as a very material part of their business—having invested several thousands of dollars in a very full stock of instruments, etc. They have determined to keep on hand large lines of goods of some of the most prominent manufacturers, and have arranged with them to promptly fill special orders. This well established firm deserves the support of the profession in their undertaking. See their page advertisement, and encourage them by giving them your patronage.

Georgia Medical Examining Board Bill.

We learn from *Southern Medical Record* that a bill will be introduced in the Georgia Legislature looking to the establishment of a Medical Examining Board in that State. Now that the matter has been thoroughly tested in Virginia and North Carolina, we are convinced that it is greatly better that no member of the Board should be a medical professor in a college in the State. It is a grave mistake to suppose that practitioners cannot examine students, nor know what they should know. Let the professors continue to teach; but let the practitioners form the Examining Boards.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

The Winyah Sanitarium.

We have been much interested in the results of cases of weak lungs and incipient phthisis that have been sent to Asheville under the care of Dr. Karl von Ruck of the Winyah Sanitarium. In his paper read recently before the Medical Society of North Carolina, he most conclusively proves that the climate, elevation, etc., about Asheville have a peculiar advantage for curable cases of consumption. His special practice in the treatment of diseases of the lungs and throat have given Dr. von Ruck also a proficiency in knowledge as to the adaptability of means to ends that makes it specially to be recommended that the crowd of phthisical patients that annually journey to Asheville without the advertising, should consult him as to their conditions.

The Southern and Gynæcological Association

Will hold its fourth annual session in Richmond, Va., beginning Tuesday morning, November 10th, 1891. The Committee of Arrangements, under the Chairmanship of Dr. Hunter McGuire, is actively at work perfecting plans and arrangements for the comfortable and social entertainment of the guests on the occasion. While the efficient committee is at work making these arrangements, active work is being done by the President, Dr. L. L. McMurtry, of Louisville, Ky., and the Secretary, Dr. W. E. B. Davis, of Birmingham, Ala.; and the reports thus early received indicate that this session will be one of unusual interest, so

far as the attendance and the value of the papers being prepared for the session are concerned. During October, the programme will be determined upon, and will be published in the November number of this journal.

Barr's Electric Lighter and Medical Coil.

This invention lays claim to attention. Aside from lighting purposes without the risk of matches, etc., several accessories can be adjusted so as to make it a really useful invention for families as well as for doctors' offices. For instance, the Medical Coil is useful to the doctor for the administration of electrical currents. This attachment can also be connected by wire to doors and windows, thus providing a complete and reliable electric burglar alarm, or if in a city, it can be connected with the street wire so as to ring a bell in the police station, fire-engine house, etc. Its price—only \$8.50—puts it within reach of doctors generally. See advertisement.

Ambulance System in Baltimore Needed.

The *Johns Hopkins Hospital Bulletin* for September says that Baltimore has no ambulance system. Accident cases and cases of severe disease are forced to rely upon the police patrol wagon, which does not furnish any adequate shelter from the sun or storm, nor good facilities for the transportation of the sick and wounded.

Murphy's Hotel,

At the corner of Broad and Eighth streets, conducted chiefly on the European plan, is the most conveniently located of all the hotels in this city for visitors attending such meetings as that of the Southern Surgical and Gynæcological Association. Its cuisine is unexcelled, and is specially adapted to the wants of those who have to keep irregular hours, as meals can be ordered at any time from 6 A. M. to 2 A. M.

Dr. Hunter McGuire

Has returned from his trip abroad in excellent health, and has entered actively on work at his hospital (St. Luke's), which is already nearly full of patients. During the summer this hospital was thoroughly renovated, and improved.

Paneropeptine

Is a new preparation of the Virginia Pharmacal Company, the formula of which is given in the advertisement. Its merits in indigestion and to assist assimilation, however, were so thoroughly tested by able practitioners before it was put on the market, that it is now presented not so much for trial as for use in appropriate cases. In fact, it is due the Virginia Pharmacal Company to state that its conservative management leads it to give thorough tests to their preparations before announcing their manufacture. Hence the reliability of their goods.

The Condom

Is the invention of a person bearing this name who lived about the time of Charles II. It is said that the invention of this "valuable little instrument," as *Northwestern Lancet* terms it, was so ridiculed that he has to change his name.

Montreal the Place for the Twelfth International Medical Congress.

The *Canada Medical Record*, August, 1891, urges the claims of Montreal as the place for holding the Twelfth Congress during August, 1896. The Editor, believing he has the hearty co-operation of the Canadian profession in this matter, proposes to attend the Eleventh Congress in Florence during August, 1892, to offer the hospitalities of his city for the session of 1892.

Congress of American Physicians and Surgeons.

The Second Triennial Meeting, held in Washington, D. C., September 22-25, was very successful. The leading weekly journals of the country began their reports of the proceedings in their issues of the same week.

Obituary Record.

Dr. Geo. W. Magruder,

Whose death from apoplexy at Fort Worth, Texas, July 19th, 1891, carried sorrow to many hearts, had been a resident of that city but a year or two. Although he had won fame in his profession, and the love and respect of a large circle of friends in Texas, it was in his native place in the beautiful Valley of Virginia, where the most useful years of

his life had been passed, that the blow fell with its severest and most saddening force. He was born in Woodstock, Shenandoah County, Va. Being the son of an eminent physician, he received the benefits of a thorough education, and early fitted himself for that eminence he acquired in after years of practice. When the Confederate war began he had been in practice with his father but a year or two; but he was among the first to take the field in defense of his State, entering the service as an officer in a company from his native town. But his qualities as a physician and surgeon were too well known to permit his remaining in the ranks, and in a few months, unsought by himself, he was promoted to the medical service, and through the long years of war that followed, no one was more faithful and earnest in the discharge of duty. All over this broad Southland are veterans who will drop the sympathetic tear as they recall the valuable service to them of this tender and skillful physician. After the war he returned to Woodstock, and resumed practice, with a success that soon brought him a large practice, and won for him the friendship of this entire section. Dr. Magruder was a Christian gentleman. At an early age he connected himself with the Presbyterian Church, and all through his life was one of its most worthy members. Although kind, gentle, and sympathetic by nature, he was always as bold and fearless as occasion demanded. A strict observance of the Code of Ethics was characteristic of his natural inclinations. True to himself, true to his profession, his fellow man, and his God, may be said of him whose untimely death we mourn.

Woodstock, Va.

D. D. CARTER, M. D.

Pepsin is undoubtedly one of the most valuable digestive agents of our *Materia Medica*, *provided a good article is used*. Robinson's Lime Juice and Pepsin (see page 28, this number,) we can recommend as such.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin on the American market, and that every lot made by them is carefully *tested*, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

VIRGINIA MEDICAL MONTHLY.

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Original Communications.

ART. I.—Is a Child Viable at Six and a Half Months? *

By LLEWELLYN ELIOT, M. D., Washington, D. C.

It is generally conceded, that children born before the termination of the sixth month, are not viable; in other words, are not capable of an independent existence.

This is a question bearing more clearly upon medical jurisprudence than upon obstetric medicine, and is considered at length; in works upon forensic medicine. While the medical man, in such cases, bases his opinion upon a study of the development of the child and a consideration of the history of the gestation, the jurist argues from a consideration of extraneous points and a distortion of the medical evidence. It is just here, that the wisdom of the French law presents itself; under this law, a child born one hundred and eighty days after wedlock, is to be considered not only viable, but legitimate and entitled to all its social and legal rights. The operation of this law, will, without doubt,

* Read at Fourth Annual Meeting of the American Association of Obstetricians and Gynecologists, in New York city, September 16th, 1891.

oftentimes afford concealment of guilt, and the recognition of illegitimate children; still it is not a just law, as it excludes the possibility of the viability of a child born previous to this period, since under peculiar circumstances of constitutional development, of which the law takes no cognizance, such a premature child might survive.

In discussing this question from an obstetric point of view, the moral character of the woman is but a silent factor; it may be irreproachable, or it may be of the worst possible description, for the development of the fetus goes on independently of moral character. Neither do the circumstances attending the birth influence us, for the stages of development are marked at all stages of the gestation, and are familiar to the student of embryology.

A child born at one hundred and eighty days is distinctly formed, and its development is about as follows: It measures from nine to twelve and a half inches; weighs from one to two pounds; the liver, the bladder, the kidneys, the tongue, the larynx, the thyroid gland, the brain, the heart, the lungs, and the lymphatics, have been formed and are ready to perform their functions; the skin presents some appearance of fibrous structure; the eyelids are agglutinated, and the membrana pupillaris remains; the eye-lashes have been formed; the funis is inserted a little above the pubis; the face is of a purplish red; vernix caseosa is present; a little down is seen on the head; meconium passes through a great portion of the intestinal canal; sacculi begins to appear in the colon; liver dark red; gall bladder contains serous fluid; testicles appear in the abdomen, and begin to move towards the inguinal canal; clitoris prominent; the nails may be distinguished, and many points of ossification are found. The child is, in a measure, viable.

I have collected, after a fairly satisfactory search of the available literature on file in the Library of the Office of the Surgeon-General of the U. S. Army, two hundred and seven cases of early viability of periods of gestation ranging from four months to eight months.

No.	WHERE RECORDED.	REPORTED BY	Period of Utero-Gestation.	LIVED.	REMARKS.
1	Rev. Obs. et Gynee, Paris, 1891, Vol. VII., p 64-72.		4 months.	Lived.	Weight, 320 grammes; length not given. No particulars.
2	Nouv. Dic. de Med. et Chir., Vol. XVI., p. 15.	Baillv (Tidy Legal Med Vol III.)	4th month.	Lived 1½ hours.	
3	Taylor, Prin. and Prac. Med. Juris, Vol. II., p. 229.		127 days after delivery	do to maturity.	The Cecil James Gordon case—One hundred and twenty days after
4	Extr. Med. and Surg. Jour., 1815, Vol. XI., p. 445	Rodman.	Less than 19 wks	do 20 months.	Wiped and wrapped in flannel, and fed with toast-water and sugar.
5	Obs. Jour. Gr. Brit., Lond., 1873-5, Vol. I., p. 80.	Madden.	Not more than 4½ months.	do 20 minutes.	Sixth pregnancy; quickened Sept. 28th, delivered Oct. 7th—Male.
6	Med. Gaz., Lond., 1847, Vol. XXXIX, p. 97.	Maisonneuve.	4½ months.	do 6 hours.	Expelled in the membranes from which it was removed two hours after—respiration then established.
7	La Med. Légale Relative al'Art Accouch., Paris, 1821, p. 157.	Capuron.	4½ months.	do 80 years.	The case of Fortunio Liceti.
8	Velpéau, Elements of Midwifery.	Bonnar's table.	4 mos. 17 days.	do 12 months.	Last menstruation August 5th. deli ered December 26th, child lively; wrapped up and placed by stove; swallowed sugar and water
9	Boston M. and S. Jour., 1854-5, Vol. LI., p. 500.	Casey.	4 mos. 21 days.	do 10 hours.	Last menstruation February 13th, delivered July 4th. Moved and breathed and made a feeble cry.
10	Obst. Gazette, Cincin., 1882, Vol. V., p. 568.	Williams (by Stevens).	4 mos. 21 days.	do ½ hour.	Third pregnancy; wrapped in warm flannels; child well developed in e ery way.
11	Amer. J. M. Sc., Phila., 1853, Vol. XXV., p. 330.	Barrows.	4 mos. 24 days.	do 40 minutes.	First pregnancy; weight 1 lb 6 dis.; length, 10 inches
12	do do do	Francis (by Barrows).	4 mos 20 days.	do 1 hour.	First pregnancy; wrapped up, fed with sugar water, then with milk
13	South. J. Med. Sc., N. Orl., 1856-7, Vol. I., p. 234.	Kennedy.	140th to 145th day	Living at 12 years.	Heart action feeble, pulsations in cord strong. Cried strongly and swallowed some food. Weight, under 2 lbs; length 12 inches.
14	Med. Chir. Rev., Lond., 1844, p. 266.	Saythe.	148th day.	Lived 12 hours.	Membrana pupillaris entire; testicles had not descended; head covered with hair.
15	Lancet, Lond., 1870, Vol. II., 525.	Newington.	149 days (twins).	do 20 minutes.	Weight, 1 lb 3½ oz; length, 11½ inches. Cried. Last menstruation April 4th delivered September 3d.
16	do do do	do	149 days.	do 15 minutes.	Weight, 1 lb, 3½ oz; length, 11½ inches. Cried. Last menstruation April 4th, delivered September 2d. Breathed, pulsations could be felt for five minutes after respiration had ceased. Cried feebly and respired freely. Age judged from the development.
17	Obst. J. Gr., Brit., Lond., 1873-4, Vol. I., p. 80.	Madden.	End of 4th mo. or commencement of 5th	do 1 hr. 25 min.	Kinghorn Trial, 100 B. C.
18	Edin. M. Jour., 1865, Vol. X., p. 572.	Collins (by Bonnar).	150 days.	do 3 minutes.	Kinghorn Trial, 100 B. C.
19	do do do	do	do	do 2 hours.	Kinghorn Trial, 127 A.
20	An. d'Hygiene, Pub.	Meli	do	do	Kinghorn Trial, 127 A.
21	do do do	do	do	do	Kinghorn Trial, 127 A.
22	do do do	do	do	do	Kinghorn Trial, 127 A.
23	Hencke's Zeitschrift der S. A., 1814, p. 241.	Ruttel.	do	do 24 hours.	Born in 1748. Writings of Bronzet. Kinghorn Tr., 146 B. C.
24	Edin. M. Jour., 1865, Vol. X., p. 572.	Bronzet (by Bonnar).	do	do 16 months.	Male. Menstruated second week of December, conceived December 25 h, delivered May 29th; weight, 1 lb. 1 oz; length, about 12 inches. Cried several times
25	Obst. Gazette, Cincin., 1882, Vol. V., p. 568.	Seoville (by Stevens).	155 days.	Lived 23 hours.	Small and weakly. Last menstruation December 26th, delivered June 4th. Child died June 25th.
26	Tr. Obst. Soc., Lond., 1871, Vol. XIII., p. 132.	Routh.	22 weeks 2 days (156 days)	do 21 days.	

TABLE OF CASES OF EARLY VIABILITY—CONTINUED.

No.	WHERE RECORDED.	REPORTED BY	Period of Utero-Gestation.	LIVED.	REMARKS.
27	Med. Times, Lond., 1850, Vol. I, p. 249	Barker.	158th day.	do 3½ years.	Weight, 1 lb.; length, 11 inches. Suckled after a month.
28	Obst. Jour. Gr. Brit., Lond., 1874-5, Vol. II, p. 97.	Edis.	5 mos. 10 days.	do 46 hours.	Weight, 1½ lb.; length, 11 inches. Cried. Fed with spoon; passed meconium and urine; could not be made warm. Born 5 months and 10 days from the date of last period.
29	Amer. J. M. Sc. Phila., 1853, Vol. XXV, p. 380.	Francis (by Barrows).	23d week.	Living at 7 years.	Male. First pregnancy. Menstruation ceased May 1st, quickened September 17th, delivered October 10th. Weight, 1½ lb.
30	Boston M. and S. Jour., 1864-5, Vol. LXXI, p. 324.	Minot.	23 weeks 1 day.	Lived 48 hours.	Weight, 1½ lb.; length, 9 inches.
31	Amer. J. M. Sc. Phila., 1853, Vol. XXV, p. 380.	Velpeau (by Barrows).	5 mos 12 days.	do 28 hours.	
32	Med. Gazette, Lond., Vol. XIX, p. 665.	Thompson.	165 days.	do 3½ hours.	
33	Montgomery, Symp. Pregnancy, p. 261.	Charles.	5½ months.	do few hours.	
34	Jour. de Accouch. Liège, 1886, Vol VII, p. 85.	Mariceau.	do	do 1 hour.	Weight, 600 grammes.
35	Observations sur la Grossesse et l'Accouchement, Paris, 1715, p. 85.		do	do 8 days.	Cried at intervals.
36	Henke's Zeitschrift, Vol. VI, p. 12.	Fleischmann.	168 days.	do 8 days.	Weight, 1 lb. 5 oz.; length, 11½ inches.
37	Med. Gazette, Lond., 1835, Vol. XVII, p. 92.	"D. A."	5 mos. 21 days.	do 7½ months.	Married March 3d, delivered August 24th. Very weak, weighed 3 lbs. Jarrold Case. Lived 7½ months, according to Taylor and Kinghorn Trial.
38	Lancet, Lond., 1874, Vol. II, p. 764.	Carter.	172 days.	do 21 hours.	Weight, 1 lb. 6 oz.; length, 12 inches. Cried. Passed urine and meconium; given milk and water.
39	Taylor, Prin. and Pract. Med. Juris, Vol. II., p. 229.		174 days.	do to adult age.	The Auckland Case. Born 174 days after a delivery.
40	Trans. Amer. Gynec. Soc., 1889, Vol. XIV, p. 449	Jaggard.	5 mos. 24 days.	Living, soon expired.	Last menstruation February 26th, abortion produced August 19th. Moved its limbs, but soon expired.
41	Med. Record, N. Y., 1889, Vol. XXXV, p. 656.	Nascher.	5 mos. 25 days.	Lived 10 hours.	Weight less than 2 lbs.; length, 11 inches. Conception took place after November 15th, delivery May 10th. Child cried; took fenel tea.
42	Med. Chron., Montreal, 1853-4, Vol. I, p. 68	McColloch.	At 175 days.	do 3 hours.	Weight, 810 grammes; length, 30 cm. Born 5 months and 27 days after marriage.
43	Mini. et Bull. de Soc. Méd., Bordeaux, 1869, Vol. —, p. 166-171.	Cazeau.	5 mos 27 days.	do short time.	Kinghorn Trial, 99 B.
44	Edin. M. Jour., 1865 Vol X, p. 572.	Zittman (by Bonnar).	177 days.	do	Kinghorn Trial, 99 B.
45	do	Ammon (by Bonnar).	178 days.	do	Female. Length, 13 inches. Not washed, wrapped in cotton; given cod-liver oil and milk until able to nurse. Had little hair, nails imperfect.
46	Amer. J. Obst., N. Y., 1876, Vol. IX, p. 666.	Githens.	178 days.	do	
47	Lancet, Lond., 1842, Vol. II, p. 119.	Tait.	179 days	do 4 months 7 days	Very feeble
48	Edin. M. Jour., 1865, Vol. X, p. 572.	Velpeau (by Bonnar).	180 days.	do	Kinghorn Trial.
49	New York M. Jour., 1867, Vol. V, p. 346.	Stolz (by Ed. N. Y. M. J.).	At about 5th mo.	do 1 hour 40 min.	Child small. From M & S. Reporter, P. 44, by Editor N. Y. M. J.
50	Lancet, Lond., 1874, Vol. II, p. 764.	Wiltshire.	At 5th mo. (twins)	do 3 or 4 hours.	Related at Obst. Soc., London, November 4th, 1874, in discussion of Carter's paper.
51	do	do	do do	do 24 hours.	Related at Obst. Soc., London November 4th, 1874, in discussion of Carter's paper.
52	Pacific M. and S. J., San Fran., 1868-9, Vol. —, p. 452	Tyrell.	do do	Living.	Related at Proc. Sacramento Soc. for Medical Improvement, Jan'y 9, 1869.
53	Obst. J. Gr. Brit., Lond., 1873-4, Vol. I, p. 84.	Vellesius (by Madden)	do do	Lived 12 years.	Franciscus Vellesius from "Anatomical Exercitationes concernig the Generation of Living Creatures," &c., by William Harvey, p. 477, London, 1653.
54	Playfair System Midwifery, p. 243.	Playfair.	In the 5th month.	do 3 hours.	

55	[Med. Légalo, —, Vol. I, p. 228.	Devergie.	15th month.	do to adult age.	(Case of Cardinal Richelieu.
56	[r. Obst. Soc., Lond., 1873, Vol. XIV, p. 67.	Smith.	do	Born alive.	
57	[Montgomery, Symp. Pregnancy, p. 261.		5 months.	Lived a few minutes.	
58	[Med. Gazette, Lond., 1835, Vol. XVII, p. 92.	Hamilton (by "D. A.")	do	do	Five lunar months after marriage, 1710. Case of Rev. Thomas Elder.
59	[Lancet, Lond., 1865, Vol. II, p. 535.	Moore (J. D.)	do	do few seconds.	Showed signs of life by making inspiratory movements.
60	[Lond. and Edin. M. J. M. Sc., 1842 Vol. II, p. 260.	Cochrane.	At end of 5th mo.	do 6 days.	Male. Weighed 2 lbs., 8 oz.; length, 14 inches. Passed urine and faeces; testicles had not descended.
61	[Med. News, Phila., 1882, Vol. X L L., p. 473.	Rowland.	Bet. 5th and 6th months (twins)	One lived few seconds	Expired immediately. Last menstruation in April, delivered Sep. 23d.
62	[M. and S. Repertier, Phila., 1889, Vol. LXII., p. 351.	Moore (J. II.)	Last of 5th mo or 180 days.	Lived 15 months.	Second Pregnancy. Put in flannel blanket. Fed drop by drop; nursed from third month.
63	[Edin. M. Jour., 1865, Vol. X, p. 572.	Collin's (by Bonnar)	do	do 5 minutes.	From Dublin Lying-in Hosp. Report. Kinghorn Tr., 100 C.
64	do	do	do	do 1 hour.	do
65	do	do	do	do 6 hours.	do
66	do	do	do	do 9 hours.	do
67	do	do	do	do 19 hours.	do
68	do	do	do	do 11 hours.	do
69	do	do	do	do 12 hours.	do
70	do	do	do	do 16 hours.	do
71	do	do	do	do 1 day.	do
72	do	do	do	do	do
73	do	do	do	do	do
74	do	do	do	do	do
75	do	do	do	do	do
76	do	do	do	do	do
77	Whitehead on Abortion.	Taylor's Med. Juris.	do	do 6 hours.	do
78	do	do	do	do	do
79	do	do	do	do	do
80	do	do	do	do	do
81	do	do	do	do	do
82	do	do	do	do	do
83	do	do	do	do	do
84	Cours de Méd. Légale.		do	do	do
85	do		do	do 15 years.	Kinghorn Tr., 143 G., 126 F.
86	Edin. M. Jour., 1865, Vol. X, p. 572.	Belloc (by Bonnar).	do	do 15 years.	do
87	do	do	do	do 2 years.	do
88	do	do	do	do 2 years.	97 A.
89	do	do	do	do 2 years.	do
90	do	do	do	do 4 months.	do
91	do	Millor (by Bonnar).	do	do 6 weeks.	do 110 D.
92	Whitehead on Abortion.	Aitkins (by Bonnar).	do	do 10 days.	do 124 A.
93	[Edin. M. Jour., 1865, Vol. X, p. 572.	Taylor's M. Juris, p. 572.	do	do 11 days.	Kinghorn Tr., 131 B.
94	[Favor, Prin. and Pract. Med. Juris., Vol. II, p. 228.	Mayne (by Bonnar).	180 days.	do to adult age.	Female. Born 182 days after marriage. The Hamilton Case.
95	Jahrbuch, Vol. III, p. 128.	Kopp (Tidy Leg. Med.	182 days.	do 4½ inches.	Weight, 2 lbs.; length, 12¼ inches.
96	Edin. M. Jour., 1865, Vol. X, p. 572.	Vol. III.	182 days.	do to adult age.	Born about 1799. Kinghorn Tr., 116 C.
97	[Lancet, Lond., 1871, Vol. II, p. 764.	Buchanan (by Bonnar)	183 days.	do 5 hours.	Related at Obst. Soc., London, November 4th, 1874, in discussion of Carter's paper.
98	Edin. M. Jour., 1865, Vol. X, p. 572.	Brodie (by Carter).	6 mos. 1 week.	do 14 years.	Kinghorn Tr., 108 B.
99	[r. Amer. Gynec. Soc., 1889, Vol. XIV, p. 457.	Hutchins (by Bonnar).	187 days.	do 19 hours.	(Case of abortion. Weight, 1 080 grammes; length, 35 cm. Cried lustily.
100	Buchaltz, Beitrage, Vol. II, p. 104.	Buchaltz (by Bonnar and Tidy.	6 mos. 8 days.	do 2 days.	Weight, 1½ lbs.; length, 14 inches.
	Med. Chir. Rev., Lond., Vol. XXXI., p. 438.	Outrepoint.	27 weeks.	do some years.	

TABLE OF CASES OF EARLY VIABILITY—CONTINUED.

No.	WHERE RECORDED.	REPORTED BY	Period of Utero-Gestation.	LIVED.	REMARKS.
101	Gazette des Hôpitaux, Paris, 1851, Vol. VIII, p. 297.	Ducas.	6 mos. 10 days.	Living at 4th month.	Fed with toast-water and milk; breast on second day.
102	Brit. and Foreign Med. Rev., Lond., Vol. IX, p. 558.	Velpeau.	199 days.	Lived 16 months.	
103	Edin. M. Jour., 1865, Vol. X, p. 572.	McWhirter (by Bonnar).	199 days.	do 18½ years.	Kinghorn Tr., 132, A.
104	Prov. Med. and Surg. Jour., Lond., 1841, Vol. II, p. 473.	Dodd.	6 mos. 11 days.	do	Very feeble. Reckoned from July 1st, 1838, child born January 11th, 1839.
105	Edin. M. Jour., 1881, Vol. XXXVI, p. 1033.	Ronaldson.	192 days.	Living at 5 months.	Related at Obst. Soc., Edinburgh, February 9th, 1881.
106	Med. Chron., Montreal, 1853-4, Vol. I, p. 68.	McColloch.	6 mos. 11 days.	do at 10 years.	Last day of menstruation November 27th, delivered June 8th. Weight, 1½ lbs; length, 10 inches. Cried, but was feeble. See history.
107	Tr. Amer. Ass'n Obs. and Gyn. c., 1891, Vol. IV, p. 68.	Eliot.	6 mos. 11 days.	do at 4 months.	
108	Paylor's Prin. and Prac. Med. Juris., p. 576.	Pupil of Taylor.	195 days.	Lived 14 hours.	Male, in fourth pregnancy; born 195 days after last menstruation.
109	Obst. J. Gr. Brit., Lond., 1873-4, Vol. I, p. 84.	Walden.	193 days.	do 6 hours.	Weight, 1,450 grammes; length, 37 cm. Kept in incubator; sent out on sixteenth day, died a few days afterwards.
110	Jour. d'Accouch., Liège, 1886, Vol. V, p. 109.	Charles.	6½ months.	do about 3 weeks.	Respired with difficulty, did not cry, did not open eyes; impossible to warm it.
111	Ann. d'Hygiène, Par., 1877, Vol. XLVIII, p. 555.	Pollillon.	do	do 10½ hours.	
112	Obst. Jour. Gr. Brit., Lond., 1873-4, Vol. I, p. 80.	Madden.	do	do considerable time.	
113	Tr. Med. and Phys. Soc. Calcutta, Vol. I, p. 364.	Baker.	Living at 1 mo 20 days	Living at 1 mo 20 days	
114	Bull. Soc. Anat. de Paris, 1873, Vol. XLV, p. 3.	Budin.	6½ months.	Lived 8 hours 15 min.	
115	Med. Leg. des Accouch., p. 162.	Capuron.	do	do 2 years.	
116	do do	do	do	do 10 years.	
117	Peoria M. Monthly, 1883, Vol. IV, p. 155.	Richardson.	do	do	
118	Arch. Gyn., Obs. and Ped., N. Y., 1881, p. 320.	Collier.	do	do	
119	Edin. Med. Jour., 1881, Vol. XXXVI, p. 1033.	Rattray.	do	do	Wrapped in wool and placed by stove; oiled, given milk and water; suckled. Weight, 2 lbs 2 oz.
120	Arch. de Local, Par., 1879, Vol. X, p. 756.	Bailey.	6 mos. 20 days.	do 2 days.	Related at Obst. Soc., Edinburgh, February 8th, 1881, in discussion of Ronaldson's Case.
121	Henke's Zeitschrift, Vol. VI, p. 12.	Fleischman.	196 days.	do 2 days.	Very weak; placed in incubator; fed with milk and water.
122	do do	do	196 days.	do 2 days.	Kinghorn Tr., 145 note. Weight, 1 lb. 12 oz; length, 17 inches.
123	Edin. M. Jour., 1865, Vol. X, p. 572.	Merriam (by Bonnar).	198 days.	do to maturity.	do do 1 lb. 14 oz.; do 14½ do
124	Paylor, Prin. and Prac. Med. Juris., p. 573.	do	198 days.	do to maturity.	do 53 B. Bailey Divorces Bill.
125	Lancet, Lond., 1842, Vol. II, p. 119.	Orbbs (by Taft).	295 days.	do 6 weeks.	
126	Med. Gazette, Lond., 1843, Vol. XXXII, p. 623.	Holst.	About 171 days.	do 6½ weeks.	Last menstruation middle of February, movements June 23d, delivered August 2d. Could not suck; fed with cow's milk, water and gruel. Weight, 1½ lb; length, 13 inches.
127	Obst. J. Gr. Brit., Lond., 1873-4, Vol. I, p. 84.	Spiegelius (by Madden).	Begin'g of 6th mo.	do to maturity.	Weak. Adversus Spicilius from "Anatomical Exercitations concerning the Generation of Living Creatures," etc., by William Harvey, p. 477. London, 1653.
128	Henke's Zeitschrift der S. A., 1834, p. 241.	Rüttel (Tridy Leg. Med., Vol. III).	6th month.	do 3 hours.	One of twins.
129	do do do	Rüttel (Tridy Leg. Med., Vol. III).	do (twins)	Living at 1 year.	
130	do do do	Rüttel (Tridy Leg. Med., Vol. III).	do	do at 1 year.	

131	Bedford, Prin. and Pract. Obst., foot-note, p. 263.	Bruce.	In the 6th month.	Lived to maturity.	Female. Weight, 2 lbs. Cried; oiled, wrapped in cotton, given milk.
132	Edin. Med. Jour., 1881, Vol. XXVI, p. 1033.	do	6 months.	do 40 hours.	Fourth pregnancy.
133	do do do do	Sinclair (by Bruce).	do	do 1½ years.	Related at Obst. Soc., Edinburgh, February 9th, 1881, in discussion of Ronaldson's Case.
134	do do do do	Wilson.	do	do 3½ months.	Related at Obst. Soc., Edinburgh, February 9th, 1881, in discussion of Ronaldson's Case.
135	Obst. J. Gr. Brit., Lond., 1873-4, Vol. I., p. 84.	do	At 6 months.	do to maturity.	Related at Obst. Soc., Edinburgh, February 9th, 1881, in discussion of Ronaldson's Case.
136	do do do do	Carten (by Madden).	6 months.	do 11 days.	Two feeble to suckle; milk squeezed into mouth
137	do do do do	B. mes (by Madden).	At 6th month.	do few hours.	Died same night. First pregnancy.
138	Amer. J. Obst., N. Y., 1830, Vol. XXIII, p. 36.	Winter.	6 mos. & few days	do 21 days.	Mother was jaundiced; otherwise child would have survived.
139	Dublin Quertly, J. M. Soc., 1843, Vol. I., p. 562.	do	6th month	do some time.	Weighted less than 2 lbs.
140	J. d'sses Femmes Par., 1885, Vol. XIII, p. 345.	Pilot.	At 6 months.	do to maturity.	Very s. all. Wrapped in flannel. Female.
141	do do do do	Charles.	6 months.	Living.	At birth seemed dead, but under proper treatment, revived.
142	do do do do	Forster.	6 months.	Lived 30 minutes.	Case of albuminuria. Female.
143	Obst. J. Gr. Brit., Lond., 1879-4, Vol. I., p. 84.	Avicenn (by Madden).	6th month.	do healthy.	Occurred in a case of morphia poisoning, successfully treated with atropia. Male
144	Med. Gazette, Lond., 1817, Vol. V., p. 1022.	Davies.	Between 6th and 7th mos. probably 7th month.	do 10 minutes.	Avicenn from "Anatomical Exerciatioms concerning the Generation of Living Creatures," etc., by William Harvey, p. 477, London, 1653.
145	Med. Times, Lond., 1850, Vol. I., p. 249.	Hamilton (by Barker).	do	do nearly 3 days.	Did not cry; showed signs of life by moving its limbs.
146	do do do do	Arman.	End of 6th mo. to middle of 7th.	do 4 mos. 8 days.	' I have lately brought a child into the world, a few days after the completion of the sixth month, which, to my surprise, was alive, and lived nearly three days.'
147	Edin. Med. Jour., 1881, Vol. XXVI, p. 1033.	Bartray.	do	do 5 days.	Female.
148	Obst., J. Gr. Brit., Lond., 1873-4, Vol. I., p. 84.	Madden.	At about 7 mos.	do 1½ hours	Related at Obst. Soc., Edinburgh, February 9th, 1881, in discussion of Ronaldson's Case.
149	Montgomery, Symp. Pregnancy, p. 261.	do	7 months.	do to maturity.	Acrophalous female. First pregnancy.
150	do do do do	Charles.	At 7 months.	do	George III.
151	Med. Press and Circ., Lond., 1881, Vol. XLIV, p. 465.	Gooding.	About 7 months	do	Chaucer.
152	Can. Med. and S. J., Montreal, 1886-7, Vol. XV, p. 293.	Murphy.	About 7 months.	do	Male.
153	Tr. Drake Acad. Med., Evansville, 1874, Vol. I., p. 40.	do	About 7 months.	Living at 4 months.	Died the following day. Female. Weight, 3½ lbs.
154	Edin. Med. Jour., 1865, Vol. X., p. 572.	Co lins (by Bonnar).	210 days.	Lived 5 minutes.	Small and feeble. Fed and nursed; became wrinkled and jaundiced.
155	do do do do	do	do	do	Weight, after dressing, 3½ lbs.
156	do do do do	do	do	do	Kinghorn Tr., 100 C., Dublin Lying-in Hospital Report.
157	do do do do	do	do	do	do do
158	do do do do	do	do	do	do do
159	do do do do	do	do	do	do do
160	do do do do	do	do	do	do do
161	do do do do	do	do	do	do do
162	do do do do	do	do	do	do do
163	do do do do	do	do	do	do do
164	do do do do	do	do	do	do do
165	do do do do	do	do	do	do do
166	do do do do	do	do	do	do do
167	do do do do	do	do	do	do do
168	do do do do	do	do	do	do do

TABLE OF CASES OF EARLY VIABILITY—CONTINUED.

No.	WHERE RECORDED.	REPORTED BY	Period of Utero-Gestation.	LIVED.	REMARKS.
169	Edin. Med. Jour., 1865, Vol. X, p. 572.	Collins (by Bonnar).	210 days.	Lived 1 day.	Kinghorn Tr., 100 G., Dublin Lying-in Hospital Report.
170	do do do	do do	do do	do do	do do
171	do do do	do do	do do	do do	do do
172	do do do	do do	do do	do do	do do
173	do do do	do do	do do	do do	do do
174	do do do	do do	do do	do do	do do
175	do do do	do do	do do	do 2 days	do do
176	do do do	do do	do do	do do	do do
177	do do do	do do	do do	do do	do do
178	do do do	do do	do do	do do	do do
179	do do do	do do	do do	do 3 days.	do do
180	do do do	do do	do do	do do	do do
181	do do do	do do	do do	do 1 day.	do do
182	do do do	do do	do do	do do	do do
183	do do do	do do	do do	do 4 days.	do do
184	do do do	do do	do do	do do	do do
185	do do do	do do	do do	do do	do do
186	do do do	do do	do do	do do	do do
187	do do do	do do	do do	do do	do do
188	do do do	do do	do do	do do	do do
189	do do do	do do	do do	do 6 days.	do do
190	do do do	do do	do do	do do	do do
191	do do do	do do	do do	do 7 days.	do do
192	Med. Times, Lond. 1850, Vol. XXI., p. 129.	Fincham.	do do	do do	do do
193	Tr. Amer. Ass'n Obs. and Gynec., 1891, Vol. IV.	Elipot.	7 months 1 day.	do do	Last day of menstruation July 2d, delivered February 2d. Cried; fed with milk and water; eyes opened; hair and nails formed. First pregnancy.
194	Jour. de Accouch. Liège, 1877, Vol. VHI.	Charles.	7 months.	do 8 days.	Born 7 months and 1 day after marriage. Female. See history.
195	Arch. de Locul., Par., 1883, Vol. 10, p. 99.	do do	7 months (twins)	do 1 hour.	Weight, 750 grammes; length, 0.35 m.
196	do do do	do do	7 months.	do 3 hours.	Weight, 1,550 grammes; length, 0.43 m.
197	Med. Chron. Montreal, 1853-4, Vol. I, p. 68	McColloch.	7 months 13 days.	Living at 3 months.	
198	J. de Sages Femmes, Par., 1884, Vol. VI, p. 35	Pilot.	7½ months	Lived 12 hours.	
199	Tr. Me. Med. Ass'n 1883-5, Vol. VIII., p. 87.	Burbank.	At nearly 7½ mos.	do do	
200	do do do	do do	do do	do 1 week.	
201	Gazette Obs., Par., 1874, Vol. III, p. 78.	do do	At 7 mos 3 weeks	do do	
202	do do do	do do	7½ months.	Living at 16 years.	
203	Tr. Amer. Ass'n Obs. and Gynec., 1891, Vol. IV.	Cordes.	do do	Not revived.	
204	do do do	Pilot.	do do	Lived 4 days.	
205	Med. Record, N. Y., 1884, Vol. XXV., p. 84.	Elipot.	End of 7th month	Living at 8 years.	Weight, 625 grammes. Asphyxiated, not revived. Weight, 2,450 grammes; artificial delivery. Extremely small; cyanosed; could not be made warm; given milk and water; not able to nurse. Male. See history.
206	Tr. Me. Med. Ass'n, 1883-5, Vol. VIII., p. 87.	Cawser.	do do	Lived.	Born in membranes; could not tied. Second pregnancy.
207	do do do	Burbank.	do do	Lived a few hours.	

Of the cases born at less than five months, it is stated in the reports: One lived 12 months, one lived 21 months, one lived 12 years, one lived to adult age, and one lived to 80 years—this last case being Fortunio Liceti. Of those born at, or in the fifth month, one lived 16 months, one lived $3\frac{1}{2}$ years, one lived 7 years, one lived 12 years, and one lived to old age—this last case being Cardinal Richelieu. Of those born at or in the sixth month, two lived 1 year, one lived $1\frac{1}{2}$ year, four lived 2 years, two lived 10 years, one lived 14 years, two lived 15 years, one lived $18\frac{1}{2}$ years, six lived to adult life, and one lived some years. Of those born at or in the seventh month, one lived 8 years, one lived 16 years, and three lived to maturity.

In other cases, not mentioned, a glance at the table will show how long each child survived so it is not necessary to particularize them here.

The cases of most interest are those recorded as having a period of utero-gestation covering less than six months, as, in these cases, the plea of superfœtation is likely to be advanced, but I do not think upon tenable grounds, and for this reason: The first case is that in the family of Cecil James Gordon; the second delivery was one hundred and twenty-seven days after the first, and one hundred and twenty days after coition. I do not think a second fœtus, even admitting the plea for the sake of argument, could by any possible means have remained in the uterus unharmed during the manipulations necessary to the management of a confinement.

When we remember the fact that we must have a contracted uterus and a certain amount of lochial discharge in every delivery, the justice of my denial of this plea is apparent; and when we further remember that, in a miscarriage or an abortion—use whichever term we choose—where there is twin conception, if one ovum is discharged, the second will invariably follow in a few days, or be passed before the completion of term, if we have not already removed it with the curette.

The fœtus derives its nourishment from the maternal

blood, through the placenta, and anything which affects the mother's nutrition affects that of the fetus. Remembering this fact, we are prepared for the birth of badly-developed premature children.

The following are the brief histories of three cases of early viability occurring in my practice:

CASE I.—Elizabeth D. C——, white, born in the District of Columbia, aged 23 years, of good history; menstruated from the 22nd to the 27th of November, and was delivered of a female child on the 8th of June, being six months and eleven days after menstruation. The labor was easy, and lasted 10½ hours. The child was very small and feeble, and was fed with milk and water for a few days, when it took the breast, the milk being continued.

The child was living at four months, when I lost sight of it. This was the woman's first pregnancy.

CASE II.—Margaret R. W——, white, born in Missouri, aged 23 years, of nervous temperament; menstruated from the 15th to the 19th of September, and was delivered of a male child on the 20th of April, being seven months and one day after menstruation. Her menstrual history showed a regularity in the periods and a proper quantity. Her general health was good, although inclined to attacks of nervous depression. After one of these attacks of unusual severity, she experienced pain in the back and other symptoms of labor, at 10 o'clock on the morning of the 19th of April; these pains continuing, a vaginal examination was made, showing a softening and dilating os; head presenting. The pains continued with more or less severity until the evening of the 20th, when she was delivered naturally of a male child, which was living and cried. The cord was not tied until its pulsations had ceased. The placenta did not come away readily, and the hand was introduced to remove it.

Examination of the child showed—body and head small, skull bones soft, frontal and other sutures open, the toe-nails had not developed, finger-nails developing, testicles had not descended. Weight, 1¾ pounds; length, 10 inches. It was well-wrapped up and placed near the fire. After the mother had been washed and made comfortable, attention was paid to the child, which was found to be lively. With little expectation of its surviving, it was carefully washed and rubbed with cod-liver oil and given milk and water by the spoonful.

This was the woman's first pregnancy.

The inunctions were repeated morning and evening, and the milk and water continued every hour or so, just as the child would take it. On the fourth day it took the breast. The milk was now discontinued, but the inunctions were continued. The child began to thrive, and is now living and hearty.

CASE III.—Rosa A. E——, white, born in the District of Columbia, aged 34 years, of good health; menstruated from the 18th to the 21st of February, and was delivered of a male child on the 6th of October, being seven months and fifteen days after her last menstruation. Child very small and feeble; cyanosed; could not be made warm; could not nurse; given milk and water, which he swallowed with difficulty; cried very feebly, and died on the fourth day. This was the woman's fourth child, and was born after a labor of 16 hours.

The moral character of these women, so far as could be learned, was beyond question.

The conclusions which I wish to draw from a study of this subject, as presented by the cases forming my table, are—

1st. A child under peculiar circumstances of development is viable at four months.

2nd. A child is viable at six and a half months.

3rd. The moral character of the parents has nothing to do with the birth of a premature child, when considered from a standpoint of constitutional development.

4th. Obstetricians should strive to convince jurists of these facts.

1106 *P Street N. W.*

Dioivburnia.—Mrs. R. E. Fuller, M. D., Manager Central City Health Home, Macon, Ga., says that she has been using Dioivburnia two or three years with perfect satisfaction. In the cases of several ladies in the Home, she has used it with more satisfaction than any remedy of its kind.

ART. II.—Tuberculosis of Joints.*

By WILLIAM L. NOLAN, M. D., of Chattanooga, Tenn.

Prior to the discovery of the tubercle bacillus, many wild, erroneous theories were advanced as to the etiology of tuberculosis. Since the discovery, with reference to its etiology, a complete revolution has taken place in the ideas advanced by scientific investigators concerning this disease. The discovery of the active principle in the etiology of tuberculosis has been the most valuable acquisition to medical science, as it placed us in position to understand its pathology, which is the fundamental guiding principle in prognosis and treatment.

Within recent years the subject of tuberculosis has attracted the universal attention of the medical profession, and its pathology and course have been worked out by hundreds of competent observers. The result of this investigation is, that we have become thoroughly acquainted with the disease, as it is found in many locations, and in such tissues as the pulmonary, the glandular, and in the intestinal tract.

But there is another familiar seat for tubercles; although until very recently it has escaped investigation, it is by no means minor in its ravages upon human life. I refer to *tubercular disease of joints*. Tubercular joints are responsible for a majority of the cripples we see upon our streets, with well marked asymmetry in the limbs, or the limbs are withered and deformed, or they are met with in that very common disease known as Pott's disease of the spine.

Pathology.—This affection may be either of a primary synovial form, or a primary osteal form. The latter is found about three times as frequently as the former.

Tuberculosis of a joint may begin in the synovial membrane, or in the ends of the bones. The proportion as to the osteal or synovial form is as follows: At the knee it

* Read before the Chattanooga Medical Society, September, 189

appears in the bones, in the proportion 3 to 1: at the elbow, 4 to 1; at the hip, 15 to 1.

Primary synovial tuberculosis may be circumscribed or diffuse. The diffuse variety varies as it is accompanied with much or little thickening of the tissues.

Synovial tuberculosis may be divided into three forms:

(1.) There are numerous gray nodules in a slightly inflamed membrane. This is seen most often in general military tuberculosis; and the inflammation of the synovial tissues is of a mild type.

(2.) The second variety, anatomically, is one of some thickening and swelling of the synovial membrane, which often gives rise later to tubercular hydrops. In this form the tubercles are usually on the inner surface of the synovial membrane, and are not easily recognized, because the synovial sac is coated with a layer of fibrin which seems firm and uniformly red. This variety is usually found in the large pouches. The synovia is of a brownish red, and is often so firm that it can be dissected off. The tubercular character in this variety is *often* overlooked, for the tubercles cannot be recognized except by the aid of the microscope, since they are little if at all cheesy.

(3.) In the third form, there is a tough tissue hyperplasia, which changes the synovia into a soft, granular membrane, which is usually anæmic, but sometimes of a deep red, and the vessel walls become fatty. Throughout the swollen mass are scattered plainly visible turbercles, which can also be found in the synovial tissue. In this form, the tubercles can be seen with the unaided eye. In this variety there may be little or no effusion; but on the other hand, there are cases which rapidly tend to suppuration, either at circumscribed points, after destruction of the granulations, and the formation of an originally small abscess, or as a cheesy focus, or as a uniform filling of the joint with a liquid containing flocculent pus. In this form the synovia is coated by a pyogenic membrane composed of fibrin, with numerous cheesy tubercles. This form is the most common.

The last form of a tubercular joint which we mention is the circumscribed synovial form. This form is rare. The synovial membrane presents the following changes: Hard masses of varying size, and belonging mainly to the fibrinous part of the synovial tissues, and tough, grayish-red, pin-head tubercles can be seen by the aid of the microscope. Microscopically, this mass is composed of young connective tissue cells, part intact and part fatty, and broken-down tubercles. The blood vessels may be so enlarged that the tissue may be angiomatous, as the intact synovial membrane overlies these masses. The other joint structures may long remain unaffected, but in either case they lead to general infection, either a simple diffuse, or tuberos tuberculosis.

In the common variety of this disease, the whole inner surface of the synovial membrane is changed into knob-like masses, composed mainly of fibrin, and are of manifold shapes, with cauliflower growths, sometimes containing much fat. These tuberos, fibrinous, lipomatous forms are the exception.

The common form is the soft, granular one, with or without pus.

In primary osteal tuberculosis, we have a granulation foci, infiltrated tuberculosis, with the formation of a sequestrum. With the granulation foci, there is a defect in the bone of varying size, central, or near the surface, round, oval, or irregular. The contents of such a focus, are either a soft grayish red, or yellow, or it may be mixed with both red and yellow, with particles of bone, or they may be yellow and completely cheesy. The bony wall surrounding these foci, may be normal, softened, or contracted—the latter mainly, when the focus is located just beneath the chondral cartilage. The granulations may be continuous with other small ones in the soft wall, or lie loose in a contracted wall. A focus may remain local and heal, or may remain unchanged; but may be the starting of an outbreak of the disease after traumatism.

When the foci undergo cheesy degeneration, they have a

marked tendency to spread, either under the periosteum or in the bone with pus, and the spread may be extensive without external signs.

A tubercular sequestrum contrasts with a collection of a tubercular process, although the genesis is the same. If the sequestrum is caused by embolus, it will be wedge-shaped, and may begin as a whitish or yellowish discoloration, due to pus and tubercles in the marrow spaces.

The separation of the sequestrum begins by the formation of a thin layer of tubercular granulations here and there. The layer finally becomes complete and the cavity enlarges. Apparently the process may be arrested at any stage, either temporarily or permanently.

The influence of a granulation focus, purulent infiltration, or sequestrum upon a joint depends upon its seat. When the tubercular process opens into a joint, the synovia becomes involved with the formation of a serous or purulent exudate. If these foci are situated deep in epiphyses, it will work along toward the joint, and enter it by a minute opening with slow or stormy symptoms.

If the focus is situated on one side of the joint, the process may spread along the shaft of the bone, leaving the joint untouched, or it may invade the underlying synovial membrane locally, without general infection, or the focus in the synovial membrane may open into the joint and infect it. Finally, when the joint becomes infected, it resembles a primary synovial tuberculosis.

The cartilage may long remain intact, but eventually is undermined from the margin toward the centre, especially at points of pressure. Granulation foci form between cartilage and bone, eroding both, leaving the cartilage a loose membrane within the joint, and covering the bone with a layer of soft granulations. These granulations destroy the bone, and, if no pus is present, the process is known as "*caries sicca*."

The ligaments are early destroyed in the purulent form. The capsule, and the periosteal connective tissue swells,

and forms a juicy mass. The skin is pale and tense, the muscles atrophy, and are seemingly adherent to the underlying tissues. The swelling of the joint is of a fusiform shape. This is met with most frequently in the "tumor albianus," or white swelling.

In this form, the thickening is wholly in the soft parts, *not in the bone*. Even in old people, the thickening in 95 cases in 100 is in the soft parts. The effusion is not abundant unless it is purulent; it is usually of a clear yellow color, with flakes of lymph, and the so-called "rice bodies." Sero-purulent effusion is found, especially after perforation, or forcible movement. The diffuse synovial tuberculosis in old people is very prone to suppuration; a cheesy focus in the synovial membrane may break outward, and form a peri-articular abscess. Rarely do foci remain outside of the joint and form abscesses which do not involve the joint structures. Finally, the abscess points and forms a sinus, through which another infection occurs, and an acute inflammatory process is set up.

Symptoms and Course.—The starting point of the disease is difficult to ascertain—whether primary, osteal, or synovial forms.

König makes three divisions: 1. Tubercular hydrops; 2. Fungus tuberculosis—white swelling; 3. Cold abscess.

1. *Tubercular hydrop* may appear in either a primary osteal or synovial tuberculosis, but is more common in the synovial form. It belongs to the diffuse synovial tuberculosis with moderate swelling. It begins insidiously or rapidly after an injury, most exclusively in the knee of adults; commonly with, sometimes without previously any pain. When the liquid is withdrawn, the folds in the capsule can be felt to be thickened. After removal of the fluid, it rapidly returns. The symptoms differ widely from the fungus form. There is no contracture and no white tumor; no tendency to rapid destruction of the joint; no pain, and no fever. There are, however, intermediate forms and transformations.

2. *Fungus tuberculosis* is the common form, preferably affecting those of an hereditary predisposition, but often affecting the healthy. It usually begins spontaneously and insidiously; perhaps a very slight injury precedes. There is slight limping, when the patient first rises in the morning, with some pain, and some contracture of the muscles, which may be shown only by a diminution in the range of motion. But as the day passes away, these symptoms usually disappear, and nothing but a tired feeling is present.

In the limbs, the flexor muscles contract; in the spine, the extensors. At the superficial joints, there is slight swelling, either general or partial. At the hip, there is increased sensitiveness on pressure, and apparent lengthening of the limb from tilting of the pelvis. The process may remain for a greater or less length of time in apparently the same stage.

Atrophy of the limb is well marked. There are formations of tough tubercular granulations with or without carries sicca. In this form suppuration is rare; and spontaneous healing, after two or three years, is possible, or, at least, indefinite arrest—the joint being more or less stiff, but useful. As a rule, the whole course has been marked by absence of fever, but patient is pale and poorly nourished.

The malignant form is characterized by the presence of soft granulations, with rapid destruction of the joint structures.

The swelling rapidly increases, acute pain is present, with contractures of the muscles and fever.

The presence of fever indicates that the granulations are breaking down, and the important point about the presence of fever is the difference between the morning and evening temperatures; even if the height is low, it rises with the formation of abscesses, to sink with their evacuation.

The swelling softens at different points, because fluctuation is extremely painful, and the patient fails fast. These severe forms are most common in the young. When the osteal form communicates with a joint; when the focus is

extra-articular, the course is slow, or there may be a stormy perforation. All the severe forms destroy the joint extensively; and, although healing may be obtained, the joint and limb are forever crippled. A sinus may persist for years, and healing be only apparent, the process recurring after a longer or shorter interval. Permanent healing is rare. When a sequestrum communicates with a joint, amyloid degeneration occurs.

3. The form known as "*cold abscess*" does not include suppuration. After breaking into a joint, if of a cheesy focus, it is limited to the formation of flocculent pus, which soon perforates. It is found usually in children with diffuse synovial tuberculosis.

Prognosis.—The prognosis can be given from the train of symptoms just detailed. When the germ theory of disease was first discovered, many experiments were carried on, with the hope of finding some means which would be a cure for tuberculosis—any enemy to human life that walked about at midnight and wasted at noonday. But how far these hopes have materialized, we shall not here discuss. In the multiple form of tubercular joints, the prognosis is grave—the patients dying from exhaustion, from tubercular meningitis, pulmonary or intestinal phthisis. The relative frequency of the recovery of hip-joint disease is due to the confounding of the *non-tubercular* with the *tubercular* affection.

In milder forms, the prognosis for life is fairly good, although joint and limb are forever crippled.

Diagnosis.—The diagnosis of a tubercular joint is made only *probable* at first, but later it is easy.

It must be distinguished from different diseases, according to age. In infancy and in youth, must be distinguished from hereditary syphilis and acute osteomyelitis. Later in life from sero-fibrinous synovitis, acquired syphilis, and communicating arthritis deformans; perhaps gout and neuralgic affections.

Tubercular hydrops is distinguished from serous synovi-

tis by long observation, and by the effusion failing to disappear under the ordinary treatment for synovitis. Sometimes a positive diagnosis is made with difficulty, as both serous synovitis and tubercular hydrops are accompanied by thickening of the capsule, and both are found in adult males.

To reach a positive diagnosis, a piece of the capsule is examined microscopically. The nodular form resembles acquired syphilis, which has isolated gummata in portions of the capsule, and secondary dropsy. The history of specific infection, with the use of specific remedies, should clear up the diagnosis. But it should be remembered that a tubercular effusion will diminish under such treatment.

The diagnosis of the fungus form is more easily made. It is distinguished from acute osteomyelitis, by the history of the case. Acute osteomyelitis comes on suddenly, with stormy symptoms, after traumatism or excessive fatigue, whereas tubercular affections come on slowly.

Tubercular affections involve both ends of the bones, forming a joint; while acute osteomyelitis involves only one end, and that is usually an epiphysis. In other cases the diagnosis can be made only by an incision, which in osteomyelitis shows a sequestrum embedded in yellow granulations, or in an abscess, with a delicate pyogenic membrane, or greenish bits of epiphyseal cartilage. Sinuses which are found in acute osteomyelitis run through comparatively healthy bone, is sharply limited, and filled with yellow granulations.

In tuberculosis the granulations are more or less cheesy, the bone wall softer, or showing cheesy necrosis.

After fifteen years of age, *arthritis deformans* must be considered. It is recognized, especially at the elbow, by an enlargement of the head of the radius; at the hip the diagnosis is more difficult, but in later life it is easy to differentiate between these two diseases, by the deformity, and enlargement in the ends of the bones in arthritis deformans.

In arthritis deformans the minor articulations are first involved.

Notwithstanding all sources of error, the diagnosis of a tubercular joint is easy, although it may be difficult to say whether a sequestrum does or does not communicate with a joint, or whether the tubercular character is primarily osteal or synovial.

Circumscribed periarticular swellings, indicative of a focus of disease, are easily recognized at superficial joints, and may be shown at the hip by intra-pelvic pressure, and intra-pelvic swelling. But it is difficult to decide whether or not a sequestrum lies within the joint. Sometimes they cause excessive pain, and an unconquerable tendency to contractures, but in some they are borne very well; a long duration of the disease, suggests a tubercular character, and the existence of a sequestrum.

Finally, pus makes its appearance, and the diagnosis is made certain by the microscope.

Treatment.—The treatment of this affection will depend upon whether a sequestrum communicates with a joint. If operative measures are resorted to in the young subject, before he has completed his growth, the bones will be shortened, both by operation and arrest of growth.

An operation will affect the growth of a bone greater at that end from which it grows most rapidly—*e. g.*, the humerus grows most rapidly at the shoulder; the femur at the knee.

A rule of wide application is, that a *sequestrum must be removed*.

Another important rule is that a tuberculous joint in old people demands an operation. But in children, the treatment is different. The child should be kept growing as long as possible, so that the limb operated upon may not be too much shortened. In children, the knee *may* be operated upon, the bone scraped out, *but the epiphyseal cartilage must be left in situ*. This cannot be done at the hip and shoulder, for these joints cannot be operated upon without destroying the epiphyseal cartilages.

Conservative measures, then, are to be practiced, at such

joints as the hip, shoulder, knee, and elbow, but radical measures may be applied to the wrist and ankle.

The "conservative measures" are traction, rest and general treatment. Traction must be made in the axis of the limb when found. No force whatever should be applied to bring the limb in a proper position.

Rest can be secured by plaster dressings and by splints.

General treatment is best of all, and consists in good hygienic surroundings—iron, cod-liver oil, climate, and such like, which are so well known as to need but passing mention.

When pus is present, operative procedures are imperatively demanded, and the *operation should be a radical one. The capsule and synovial membrane must be entirely removed*, with or without resection of both ends of the bones.

The capsule *must be removed with the knife*; a short spoon will not do it effectually. All cartilage must be thoroughly removed, and the diseased part of bone scraped away; it is *not necessary* to smooth the ends of the bones. Drainage tubes should not remain in the wound longer than twenty-four hours. When these radical measures are applied to joint, if the disease returns, they must be repeated, and with greater thoroughness. After operation, the joint is always stiff.

Uses of iodoform in this disease. In old sinuses arising from tubercular joints, and also in tuberculous abscesses, iodoform, either in a solution of glycerin, or by packing with iodoform gauze, is beneficial in some cases. If the abscess ruptures of itself, it should be scraped out with a sharp spoon, then fill the cavity with iodoform, in solution, or the gauze. But if the abscess is opened by the surgeon, the knife should be used to remove the capsules and then pack the wound with iodoform gauze—or the edges of the skin turned in so that the wound leaves no gap.

Amputation.—This is the last resort when all other treatment has failed to cure the disease. When a patient is being prepared for operation upon a tuberculous joint, even if

resection is the method intended, always get his consent to do what you think best when the joint is opened, for the bones may be so diseased, and to such an extent, as to render resection impracticable. It may be laid down as a good rule to follow, that in the upper limbs resection should be done at first. But in the lower limbs, amputation should be recommended as the primary operative procedure.

ART. III.—The Toxic Effect of Tobacco Vapor, with Report of Cases.*

By W. CARROLL CHAPMAN, M. D., Louisville, Ky.

The three cases I desire to report have been recorded at length and with care, and with as much brevity as is consistent with the facts.

As to the *diagnosis*, while I feel that further and deeper research is necessary to make it positive, it is well supported by the physical and functional signs, associated with the fact that each patient had been daily subjected to the inhalation and absorption of fumes emanating from tobacco; and further, that these symptoms, when not so severe, would appear or disappear, according as the patient received the exhalation from tobacco into the system or not. Then, I have been unable to find the record of any disease to which this train of symptoms can be applied with precision. On the other hand, a grave defect, bearing on the diagnosis, is readily admitted, namely, the failure to make a chemical examination of the excretions. This error is due, principally, to having allowed myself to become so thoroughly convinced of the correctness of my diagnosis, which was concurred in by the consulting physician, as to fail to realize at that time the value of a chemical examination in confirming it, especially to the medical profession.

In treating of the toxic effect of tobacco vapor, it is my intention to confine myself closely to the graver and more

* Read before Mississippi Valley Medical Association in October, 1891.

dangerous cases due to its inhalation or absorption, or both. The obscure effects of tobacco-smoking and the inhalations from cigarettes will not be considered.

Tobacco stemmeries have a process by which they get dry tobacco in a proper condition for stemming. This is done by means of a number of reservoirs containing steam generated from pure water, which is turned on the tobacco previously arranged, so as to receive and retain the necessary amount of moisture. When ready, this is carried to the men who do the stemming. The carriers are usually children from nine to fifteen years of age. Knowing, then, that the vapor of tobacco contains numerous basic substances of the picolinic series, and several fatty acids, and probably nicotine and nicotianine, it can be readily seen how the systems of these children become saturated with these poisons.

Usually their presence is manifested during the first day or two by violent vomiting, retching, purging, and often a state of collapse, after which the system may become inured to them. Occasionally we find one whose constitution, even by contact and time, although there is a certain amount of toleration, refuses to receive them kindly, and emaciation begins, attended sooner or later by the following symptoms:

CASE I.—I was called to see Willie C., aged ten years, April 3, 1889, suffering extreme pain in the abdominal region, with the intensity centering at the umbilicus. Temperature, under the tongue, 100° ; pulse, 108, small, wiry and irregular; respiration 20 to 22, but irregular—several short, shallow respirations followed by one deep and gasping. Tongue glairy, red appearance and pointed. Patient constipated for the last several days; abdomen flat or rather depressed; urine scanty and slightly colored; skin dry, as were the hands and feet—the latter being a little cold. When near the patient the odor of tobacco was so pronounced that I made inquiries regarding it, and learned that he worked in a tobacco stemmery; and further, that he had slight attacks of similar pains at several different times, except of milder form. Though the working clothes had been displaced by his night apparel, the odor was

strong and led me to suspect tobacco as a cause. Not being able to make a satisfactory diagnosis at the time, I decided to use palliative treatment and study the disease further. Gave a hypodermic injection of morphia and atropia; ordered a large dose of castor oil to be followed by bismuth and quinia. After the patient had been given some relief, I instructed the nurse to use turpentine stupes freely should the pain return.

The next morning (April 4th) I found the patient suffering pretty much in the same way as on the evening previous—more nervous and tossing from side to side. The morphia and atropia had relieved for several hours, when the use of turpentine stupes was begun and continued until the patient became so restless they could not be applied. The oil had failed to move the bowels. Immediately I gave morphia and atropia hypodermically. Temperature, 100°; pulse, 112; respiration 22, and of the same character as on the evening previous; pupils contracted, expression marked anxiety. He described the pains as sickening. Previous to the time he started to work in tobacco, he was plump, robust and healthy, but for the last several weeks had been decreasing in flesh and weight. Ordered another dose of oil and told the nurse to apply a sinapism of mustard to the abdomen, should the pains return before I saw him in the evening.

5 P. M.—Patient had just begun to suffer intensely when I arrived. Had been quiet through the day, but slept none. Oil still refused to cause the bowels to act. Ordered it by the rectum with a pint of tepid water. Gave morphia and atropia and ordered the enema repeated in case it failed to act in one hour.

April 5th.—Patient had rested better the night before, but slept comparatively none. Pulse, temperature and respiration about the same as on the day previous. The enema had caused a scanty action upon the bowels—very dark, with greenish tinge to the liquid. No tenderness of the abdomen on pressure, except at umbilicus; pain still intense. Repeated the morphia and atropia. Although catharsis and diaphoresis were absent, I felt convinced that tobacco was the cause, and decided to push cathartic remedies to thorough effect and stimulate the skin to action. Believing there was no intussusception, I prescribed a full dose of calomel, podophyllin, extract belladonna and soda. Ordered the clothing and bed-clothing changed, and the patient sponged with tepid water and a little ammonia,

followed by mild rubbing; this to be repeated in the evening, at which time I administered morphia and atropia again.

April 6th.—Patient rested better through the night than at any time previous. Bowels acted two or three times; fæces black, with green tinge. Pain dull, sickening character; no material change in temperature, pulse or respiration. Liquid food with whisky. Continued baths; prescribed morphia, belladonna, quinia and nux vomica.

April 7th, 8th, 9th, 10th, 11th, 12th and 13th.—Patient continued pretty much the same, temperature going to 101°, with a slight advance in pulse-rate on one day. No change in treatment, except to add pepsin and hydrochloric acid. Kept the bowels open by enema.

April 14th.—Abdomen tympanitic, with tenderness; nausea and vomiting. Patient complained that the capsules made him vomit; discontinued them. Pain intense, same character as before.

April 15th.—Was sent for to relieve the pain. Administered morphia and atropia hypodermically; prescribed deodorized tincture of opium, and ordered turpentine stupes over the abdomen.

April 16th.—No change.

April 17th, A. M.—Temperature, 101.5°; pulse, 120; respiration labored. Digitalis, whisky, atropia. P. M., temperature, 102°, pulse, 130. Continued same treatment.

April 18th, A. M.—Temperature, 100°; pulse, 108; respiration improved. Slept after 1 A. M. P. M., same as morning. Rested pretty well. Continued whisky and digitalis.

April 19th.—Temperature, 99°; pulse, 100; respiration, 18, more regular. Other symptoms improved.

Improvement was gradual from this on.

April 22d.—Facial neuralgia manifested itself and lasted several days. Gave morphia and atropia and prescribed iron, quinia and strychnia. Dismissed the case on April 29th, after three and a half weeks of illness, with instructions for him never to work in tobacco again. He has obeyed, and now (two and a half years later) the boy is inclined to be fleshy.

CASE II.—Lizzie M——, aged twelve years. Worked in tobacco stemmery. Called in on July 19th, 1889. Patient was taken sick three days before with pains in the abdomen. The mother had treated her with castor oil, laudanum and hot applications, with very little relief. These remedies

had answered the purpose on two or three other occasions within the last several weeks, but the pains had never before been so violent. On the evening of the above date I found her condition as follows: Anæmic; violent pain in the abdomen with intensity centering at umbilicus; abdomen flat with only slight tenderness on pressure; constipated; urine scanty and slightly colored; tongue red and pointed; temperature in axilla, 100.5° ; pulse, 120, small and wiry and irregular; skin dry; pupils contracted; respiration 24; four or five short and shallow followed by one deep and gasping. The odor of tobacco was present. Gave morphia and atropia hypodermically. Prescribed a cathartic, also digitalis, and ordered teaspoonful of whisky every two hours.

July 20th, A. M.—Patient had rested the early part of the night; small action from the bowels, dark, greenish appearance. Pains have been severe for last hour or two; pulse, temperature and respiration same as evening before. Continued same treatment; gave morphia and atropia and ordered an enema. P. M.—Bowels had moved twice; feces dark, greenish appearance. Repeated morphia and atropia and ordered patient sponged with tepid water and ammonia and rubbed dry. Liquid food.

July 21st, A. M.—Pulse, 130; temperature, 101.5° ; respiration, 22, and more labored; abdomen slightly tympanitic. Prescribed aromatic spirits of ammonia with the digitalis. Gave morphia, quinia and strychnia in capsules, increased the whisky. P. M.—Condition same.

July 22d and 23d.—No change except abdomen little more tympanitic, and vomiting at times.

July 24th, A. M.—Vomiting, can't retain the medicine in the stomach; pulse, 140; temperature, 100° ; respiration so irregular can't be estimated positively. Whisky, hypodermically. P. M.—No perceptible change unless for worse.

July 25th.—Patient sinking; pulse, fluttering; respiration 10 and gasping. Died in the afternoon by asphyxia, after an illness of nine days. Post-mortem was refused.

CASE III.—Johnnie C——, nine years old. Called in on July 14, 1890. Patient suffering intense pain in abdomen, especially at umbilicus. Had a few slight pains a few days before, but stopped his work in tobacco stemmery and came home. The pains ceased without treatment. A day or two later resumed his work until the above date. Emaciated; abdomen, flat; very slight pain on pressure; temperature, 100° ; pulse 100, small, wiry; respiration 22 and shallow; pupils, somewhat contracted; tongue, bright red; consti-

pated. Gave morphia and atropia hypodermically; castor-oil by mouth; prescribed tincture of opium deodorized to be given when the effects of the morphia began to wear off, provided the oil acted.

July 15th.—Patient rested very well through the night. Oil moved the bowels two or three times; dark, greenish actions; temperature, 99° ; pulse, 90; respiration, 20 and easier. Diminished the opium with instructions to leave off if pain ceased. Prescribed pepsin, pancreatin, bismuth, and hydrochloric acid.

July 16th.—Left opium off and pains returned. Temperature, 69.5° ; pulse, 96; respiration, 22. Began opium immediately. Ordered him sponged with tepid water and ammonia.

July 17th.—Patient improved; pulse, 84; temperature, 98.4° ; respiration, easy. Prescribed iron, quinia and strychnia; improvement continued. Facial neuralgia developed on the 19th instant and lasted two or three days.

I desire to state just here that, during the interval between cases 2 and 3, reported above, I saw two patients, who worked in tobacco, with symptoms similar to those reported, but greatly modified. To the first of these I gave castor-oil, followed by pepsin, pancreatin, bismuth and muriatic acid, with instructions to stop work in tobacco. He followed my advice, and has not suffered in that way since. To the second I merely gave castor-oil with same instructions as to the first. He followed them for a few months, then returned to work in tobacco, which he kept up for six weeks when he came to me with the same symptoms as at first. Yielded to simple treatment, but slowly. Since case 3, I have had several mild cases. I invariably warn them to stop work in tobacco, especially where it is steamed. I believe all would have been well with the three cases reported had they stopped work in tobacco at the first warning pains.

Attention is called to two factors noticeable in all these cases, namely: The emaciation and the time each one had followed the occupation, that is, from six weeks to three months. The three cases reported had not suffered from the vomiting and retching usually attendant upon young tobacco workers the first day or two. In the other or milder cases, I neglected to inquire regarding that point.

This paper would be incomplete without a review of these cases for the purpose of considering the relation between the cause and result.

Emaciation is one of the first symptoms noticeable in persons suffering from the presence of tobacco vapor in their systems. Dr. Ydan Pouchkine, of Russia, has recently reported an interesting series of experiments relative to the influence of tobacco upon the digestive functions of the stomach. He concludes that the free hydrochloric acid of the gastric juice is diminished under the influence of tobacco, and that the motility of the stomach is increased. This would interfere with the digestion of the food, not only by lessening the power of the gastric fluid, but by hastening the matter to be digested into the duodenum before it has been subjected to the influence of the gastric juice for a sufficient length of time. Consequently, and in proportion as digestion is imperfect, would secretion and assimilation be deficient and emaciation result.

As to the particular ingredient or ingredients causing the symptoms reported, chemical examination would furnish the most weighty evidence. Having neglected that in these cases, I can only console myself by awaiting an opportunity to make that test at some future period. Our knowledge, though, of the substances entering into the composition of tobacco, and their separate and collective properties and actions upon the body, furnish us material worthy of consideration.

In regard to nicotine, which has been suggested as a cause, I must say that I do not believe it for a number of reasons. In the first place, nicotine is not readily separated from tobacco unless treated by a fluid or vapor containing alkaline properties, potassa for instance. The vapor used at the stemmeries, I learned upon inquiry, was from water only.

Again, had nicotine been the cause the effect would likely not have been so delayed, and vomiting and purging would have been present.

As to nicotianine, indications point strongly to its being a cause. According to Landerer, it occurs only in dried tobacco leaves, and has the odor of that plant, a point strongly in its favor, as that odor was so distinct in every case I have seen. It would seem, further, that the basic substances and fatty acids were causative agents, because authors have proved by physiological experiments that these cause contraction of the pupil, dyspnœa, abdominal pains, convulsions, and death.

Why these symptoms have been so delayed in these cases instead of the poisons manifesting themselves the first day or two, by retching, vomiting, etc., as is most generally the case, I am at a loss to say, and would suggest, by way of excuse, a cumulative effect.

The toxic effect of tobacco vapor and its treatment is a subject worthy of more consideration than the profession has accorded to it in the past, and I hope that the next few years, aided by diligent and careful investigation, will place the matter in a more intelligent light.

ART. IV.—Boric Acid in Non-Surgical Diseases of Women.*

By H. P. WENZEL, M. D., of Milwaukee, Wis.

In 1879, I read a paper before the Rock River Medical Society on "Procidentia Uteri; Hypertrophy and Hyperplasia of the Pelvic Organs and Tissues—especially of the Uterus," and reported a number of cases showing and illustrating the results obtained by the treatment adopted. My views were quite at variance with those laid down by the text-books. I maintained that hypertrophy and hyperplasia of the female generative organs and their contiguous tissues were caused primarily by disturbed or impeded circulation of the nutrient pabulum in the pelvic vessels, and the symptoms mostly resulted from the water-logged or

* Read before the Brainard Medical Society of Wisconsin, October 9, 1891. Published at request of the Society made by unanimous vote.

œdematous condition of the subserous tissues on the one hand, and to supersaturation and apparent overgrowth of the tissue-elements on the other; and that the first step in rationally treating these chronic hypertrophic and hyperplastic diseases with exudations implicating the tubes and ovaries, and involving the peritoneum and other adjacent structures, was to free the tissue-elements and interspaces from the exuded and diffused material. By procuring an unfettered circulation of both blood and lymph in the pelvic cavity, the tissue-lesions would be more amenable to treatment, and the recovery would be hastened.

Since then, my efforts and studies have been carried on to establish a method of treatment to fulfill these requirements. A remedy that is at once a powerful antiseptic, astringent, favoring osmosis, non-toxic in any quantity, free from staining, destructive to fetor, painless, curative, and easily manipulated, will be a beneficent aid in treating these stubborn pathological troubles. My trials and disappointments were many. I will neither speak of the many preparations used in vain, nor weary you with long reports of individual cases; but, instead, shall outline the method as carefully followed for four years in patients of all ages from under sixteen to three-score and ten years, during various stages of the afflictions in all kinds of conditions, and in the most unpleasant circumstances. The remedy is simple, cheap, easily managed, and the results obtained were always satisfactory.

But in order to make plain its uses and value, let us first take a glance at the tissues to be treated, and look at the cause and trace its march. The description following is the result of observation in practice experienced many times in different patients under my care during the last decade.

The anatomical structure of the organs and tissues in the female pelvis are vastly different from those in the male pelvis. The procreative organs of the "womb-man" are all within the pelvic cavity, reached through the vaginal tube or canal. They are so constructed that the cycle of their physiological activity through menstruation, conception,

gestation, parturition, post-partum restitution, and climacteric changes, follow certain laws in their evolution. The blood-vessels and lymphatics are numerous, large, long, and tortuous; the nerve-distribution plentiful; the ligaments by which the different organs are kept *in situ* are elastic, strong, wide, and their peritoneal reduplications many; the subserous, connective, and other tissues are loose, large-meshed and spongy; the organs are composed of three or more coats and the peritoneal covering is not tightly apposed. This admits of considerable compression or distension. The large roomy spaces between the bladder, uterus, and rectum, the length and attachment of the ligaments, and serpentine course of the vessels, permit the uterus to rise, descend, drop forward or back, and, to some extent, laterally—a vital necessity in normal functioning. The movements of the uterus are followed by the tubes and ovaries, and, to some extent, by the bladder. The positional changes of these organs is necessary in gestation—a physiological act in which all move in harmony and unison. During this time, the displacements vary, and are considerable in extent. The bladder must follow sometimes to the navel. But the rectum is indifferently affected. When the gestation-cycle is completed normally, the deviations are corrected according to natural laws.

But let anything produce a disturbance which results in an action or motion going beyond the normal deviation limit—at once a pathological state results, and forms a vicious chain varying through different grades, from the slightest inconvenience to the most complete disability. The causes may act from without or within—injuries from various sources, menstrual imperfections or disturbances, premature labor, miscarriage, dystocia, bungling use of instruments, faulty post-partum involution; and I believe that more harm is done by abortion, or by “meddlesome midwifery,” than by all other causes combined. The tissues are bruised and lacerated; displacements are produced by brute force—as was done quite recently in a young primipara seven months pregnant, causing death of the fetus,

premature labor, and serious traumatic displacement of the uterus.

The bony pelvic case encloses the organs and tissues in a relatively small space. If one organ becomes pathological, the others are sooner or later involved. The first baleful effect of these injuries or vicious deviations is manifested by disturbed circulation of the fluids in the pelvic vessels, expending its force principally upon the uterus and adnexa.

The lumen of the veins is easily narrowed by torsion or pressure; the blood-current is retarded. At first the veins become distended below the pressure-point, causing stasis; dilatation is followed by sacculation, which further impedes the circulation, and a partial stagnation results. Retarded flow favors effusion; the serum escapes through the tense vessel-walls, and the loose, large-meshed, sponge-like, sub-serous, connective tissues greedily imbibe large quantities of the exuded liquid. This filling of the tissue interspaces and super-saturation of the tissue-elements cause increased growth in one, and tumefaction in the other. If unchecked, the effusion continues, and the tissue-elements are forced to swell and macerate, thus adding another link to the vicious chain. The exuded semi-plastic liquids neither become organized or vitalized, but remain diffused in and between the tissues. The œdema thus generated may invade some or all of the organs and tissues in the pelvic cavity, but the uterus, tubes, and ovaries, and the sub-serous tissues, are always first and most affected. This water-logged state of the tissues imparts to the examining finger a resistance, varying in density from very soft dough to stony hardness.

The first step, then, begins by retarded circulation. The excess of nutrient pabulum carried to the tissue elements causes overgrowth or hypertrophy; and if deposited in the cellular tissues or between the tissue elements of the uterus, tubes, etc., hyperplasia develops or maceration sets in. Not infrequently, the exudate encases both tubes and ovaries, and partly surrounds the uterus, bladder, or rectum, fasten-

ing them down immovably, adding to their weight; increasing the vicious position; exerting pressure on the vessels; obstructing the circulation more; causing pain by imprisoning the nerves; shackling the uterine functions; causing more or less disturbance in both bladder and rectum. Sometimes the whole pelvic cavity is choked up, abolishing all motion completely, and imparting a soft, putty-like feeling to the tissues. When the whole pelvic cavity is involved, the ureters will be compressed and become distended or dilate above the pressure-point; and, while kidney-lesions or diseases, resulting from the dammed-back urine, are not common, they are far from chimerical. Often the intestinal coils are matted together, or the bowels become adherent to other organs or tissues. Pain radiates from the pelvis, and other, even distant, organs are drawn into sympathy.

The bladder becomes irritable, and imperiously demands very frequent evacuations of small quantities of urine. The matted condition of the bowels prevents normal peristalsis, and pressure on the colon and rectum becomes manifest by obstipation—rarely by diarrhœa. The rectal plexuses of veins are compressed; the veins dilate, become sacculated, resulting in annoying or burning pain in the rectal tube, or unpleasant—at times almost unbearable—pruritus of the anus, perineum, or vulva. The narrowed state of the rectum causes pain while at stool; hence defecation is delayed as long as possible to escape the suffering caused by the passage of the hardened, scybalous, fecal masses. Retrostalsis is not infrequent in the upper bowel; flatulence is common, and colicky pains are often present. Sometimes flatulence is so pronounced that the distended stomach and upper intestinal coils push up both liver and diaphragm, and thus reduce the pleural cavities—impeding respiration. The heart, even, may be displaced—becomes functionally “unruly,” and the “ball in the throat” has a similar origin—plus nervous inhibition.

The nervous state of these unfortunates is often deplorable. Exhaustion, hysterical explosions, and mental pertur-

bation, are frequent; homicidal and suicidal tendencies are sometimes observed; the patient becomes suspicious and mistrustful in the most absurd manner. Sometimes the special senses are unpleasantly affected. I have observed diseases of the eye, ear, nose, and throat, defying all treatment, until the pelvic lesion was relieved, when spontaneous recovery resulted.

The picture of a chronic, long-standing, endo-, peri-, or para-metritis, with hypertrophy or hyperplasia, or both, is very complex. From implication of so many organs, it is easily comprehended why the various developed symptoms are so often misleading or wrongly interpreted. Insomnia, anorexia, nausea, emesis, anæmia, debility, various neuralgic pains, brain symptoms, cardiac and respiratory disturbances, are more or less marked in every case, while the bladder and rectum never escape.

The swollen and macerated tissues break down sooner or later by a slow necrobiosis, resulting in erosions, fissures, fistules, ulcers, or abscesses. The vitiated secretions from the glands imbedded in the diseased tissues, mixed with the outpourings from the various lesions, are considerable in quantity, sapping the patient's vitality; besides, they are frequently sanious, fetid, or corrosive, causing ulceration of the vaginal canal or vulva, and the thighs, even, do not always escape. The uterine cavity is generally filled with ropy mucus, pus, blood, or detritus, and the os is choked with greenish, glairy, or other colored mixtures. Sometimes there is discharged a thin ichorous fetid liquid which is very offensive to the patient, and disgusting to those around her.

If coitus is permissible, conception is not possible in the large majority of cases; the acrid, corrosive exudations either destroy the fecundating fluid, or prevent lodgement of the ovum in the uterine cavity. If the seminal fluid should pass the barrier and penetrate far enough to fructify the ovum in the tube or ovary, ectopic gestation or placenta prævia may follow.

These lesions are not amenable to the knife; they require

different treatment. The exudate must be removed from the impaired tissues, and their interspaces freed. The water-logged condition must be overcome to enable the tissues to revive. Withdrawing the effused liquids removes pressure from the vessels and nerves, permits gradual restoration of the vessel lumen; this expedites the circulation, favors absorption and elimination, and hastens repair of the affected tissues.

Ordinary measures fail. Scarification is unsatisfactory, painful and dangerous. Liquids are filthy, mal-odorous, difficult to manage and are retained; some stain both tissues and clothing, others cause pain; none are capable of freeing the tissues from the exudated material.

The remedy I have employed very extensively during the last four years is *dry boric acid*. It drains the tissues, is powerfully antiseptic, destroys feter, is astringent, non-toxic in any quantity, does not stain, is painless, easily manipulated, and curative.

When but little "osmosis" is required, the finely powdered boric acid is best and most useful. It induces a flow of serum from the tissues; it is also best to use it in the uterine cavity, either with or without curetting. The powdered acid packs tightly—it purifies the cavity and hastens or favors repair.

Around the cervix, in the vaginal vault and vagina, a recrystallized boric acid, passed through a hair-sieve, having from 36 to 50 meshes to the inch, is the most useful; a coarser acid is too angular, does not pack tight enough, and its sharp points injure the tissues.

The quantity needed for one dressing to produce a free flow of liquid from the infiltrated tissues depends on the results desired, and upon the size of the cavity. I apply from six to fourteen fluid drachms usually, but have in some cases used four ounces or more at a single treatment.

Boric acid is easily applied where wanted by an applicator. I made one, capacity ten fluid drachms, by sawing off, even with the piston, the perforated end of a hard rubber vaginal syringe. A speculum is necessary. The tissues must be freed from extraneous matter by washing,

mopping, or curetting. The acid is evenly distributed, and all depressions filled with care. It is then packed gently, but firmly, over the tissues to be treated. Tampons are placed for a two-fold purpose—to *retain the acid* and to *support the tissues*. There should be no pain when the dressing is completed and the speculum removed.

The tampons must be fabricated from clean, white, fine, elastic, non-absorbent cotton, wool, jute, oakum, etc.; my preference is cotton. The tampon must be of the proper size, and must be armed with a stout string tied firmly around its centre; it must be properly introduced. Absorbent cotton imbibes liquids freely, becomes heavy, soggy, inelastic, and for these reasons fails completely either as plug or support.

Shortly after the dressing is completed, a flow of liquid begins from the affected organs and tissues, and continues for many hours, requiring the use of a napkin. Drainage has commenced and will continue until every particle of the exudated semi-plastic material has been removed. The quantity of liquid drained off in twenty-four hours varies from a few ounces to several pints or more, depending on the infiltrated or sacculent condition of the tissues. In one case the amount exceeded a gallon in the first twenty-four hours, and a total of six gallons was drained away in a fortnight, the acid being applied every second or third day, and from two to four ounces at each treatment. Briefly the case is as follows, condensed from my notes:

S. A. G., age 35; two children—youngest seven years old; perineum lacerated to rectum, but sphincter unimpaired; first labor; laceration on left side of cervix, deep cicatrized; had too severe and long sieges of peritonitis from probably specific origin; uterus down to vulva, much enlarged, anteverted, and covered with many deep ulcerations, discharging freely an acrid, corroding, fetid liquid of a dirty brownish color; vulva and upper part of both thighs carpeted with ulcers; whole pelvic cavity filled with exudate, giving the tissues a sensation of soft dough; nearly every symptom imaginable. Refused repair of perineum. Treated three months locally with boric acid; recovery complete over a year ago; now in excellent health; keeps a large boarding house. Tonic and laxative medicines internally.

The tampons may remain from twenty-four to seventy-two hours. By that time most of the acid will be dissolved; the tampon saturated and covered with a thick layer of ropy, glairy, grayish or greenish mucus, or mixed with pus or blood. The tampon is removed, and carefully and thoroughly is the vaginal canal douched with several gallons of water as hot as can be borne comfortably—about 115° to 125° F. To thoroughly and effectively cleanse the vaginal tube, the patient must lie on the back with hips elevated, and the quantity of liquid used should always be large and hot. It may be medicated.

Fetor disappears quickly; the urine increases in quantity, the irritation diminishes gradually, dragging and heaviness rapidly subside, micturition can be longer delayed without suffering.

The treatment may be repeated every second, third, or fourth day, or at such intervals as may be deemed best. During the interim the vagina and vault should be washed out thoroughly two or three times daily.

The free discharge of liquid shortly after applying the acid, disappearance of fetor, cessation of corrosion, and almost instant, though at first slight, improvement, powerfully influence the patient mentally. Where before she was depressed, indifferent, melancholy, or destructive ideas busied her mind, hope springs up and dispels the previous gloom, and the awakened desire to get well is buoyed up by what she sees and feels is being done. From intractability and stubbornness, or obstinacy, she becomes docile and obedient, thus favoring treatment and hastening repair.

Boric acid is a most valuable remedy in non-surgical gynecological diseases. It has more valuable properties than any other single drug. It can be employed in all cases and under all circumstances. It is easily handled and applied; it is antiseptic, but non-toxic in any quantity; it is astringent, but painless; favors drainage, but is not deliquescent; destroys fetor, but is itself odorless; is white, and does not stain either tissues or clothing; it is curative. But it must be used with judgment and discrimination; it is not a cure-all nor an infallible cure. Other treatment may be needed, or may be combined with

it. *The bowels need motion, the nerves support, the tissues tone, the blood nourishment, the brain rest, and the mind needs hope, peace, and satisfaction.*

Recently Dr. Alexander Duke, of Edinburgh, Scotland, discussed the uses of boric acid (in the *British Medical Journal*), in uterine diseases, giving it a warm laudation.

In closing, let me repeat, that four years' use in a large number of cases, has convinced me that boric acid is a most valuable remedy in all non-operative gynecological diseases, and that its application can be extended to many others, and to traumatisms. I hope you will give it a careful and thorough trial, and report results.

If I have succeeded in aiding you in the treatment of those unfortunate, troublesome, and difficult cases you will be called upon to alleviate, relieve and cure; if your patients can look forward with an assurance of speedy help; if your results will be as satisfactory as were, and are mine, I shall be fully rewarded and satisfied with the endless toil quietly and continuously followed up for twelve years to find a remedy of practical use to the physician and beneficial to the patient.

296 West Water Street.

ART V.—Pyelo-Nephritis.*

By "BREVIS ESSE LABORO."

Pyelo-nephritis, known also as consecutive nephritis, suppurative nephritis, and surgical kidney, is a term applied to a suppurative inflammation of the kidneys with their pelves and calices. It may be common to both kidneys, but is, with greater frequency, limited to one of these organs.

Ætiology.—The causes may be:

1st. Traumatic, as from gunshot, incised, or punctured wounds, falls, blows, or kicks.

2nd. Embolic. In ordinary endocarditis, with vegeta-

* Offered to the Medical Society of Virginia in competition for the Dr. Hunter McGuire Prize.

tions on the valves, fragments of the vegetations become dislodged and fixed in the branches of the renal arteries, producing infarctions—usually of the white variety. With malignant endocarditis, surgical pyæmia, and idiopathic pyæmia, small emboli seem to find their way into the smallest branches of the renal arteries. In these cases they do not form infarctions, but abscesses. Under this head may be considered, also, the frequent association of erysipelas and pyelo-nephritis, concerning which so much was said a few years since—the rationale of such association being, doubtless, the origination of emboli at the seat of the local suppurative processes.

3rd. Reflex, from distant irritations, as from the irritation dependent upon operations upon the uterus, ovaries, or rectum.

4th. Idiopathic abscesses, concerning which little is known.

5th. Semi-reflex or consecutive, that is, due to local irritation which has been produced by, or is the result of, more or less remote abnormal processes; as, for example, the damming up of urine by an enlarged prostate or urethral stricture, or tumors and displacements of the uterus or ovaries, or by putrefactive changes in the urine, in paralysis of the bladder, and in cystitis.

6th. Chemical, usually from the abuse of stimulant diuretics, such as copaiba, turpentine, cantharides, and alcohol.

Few cases are recorded as being attributable to the latter form of causes, and in such as are recorded, there were indications of acute nephritis preceding the pyelo-nephritis; and, therefore, these too might more properly be classed under the head of consecutive causes, as may also be those cases spoken of as occurring in connection with paraplegia; for these latter cases must be considered rather as a result of the vesical paralysis, which, in turn, was co-incident with, and caused by the diseased spinal cord. The manner in which these causes—enlarged prostate, vesical and renal calculi. urethral stricture, vesical paralysis, etc.—act upon the kidneys may be in three ways:

(a.) By obstructing the outflow of the urine from the renal pelvis. Regurgitation from the bladder is thought never to occur, but, as a result of obstruction from any cause, more or less of the full force of the secretion acts upon the ureter, the pelvis, and the pyramids, and extends along the tubules to their closed ends. This constant tension is a common cause of chronic inflammation. In cases of chronic obstruction to the outflow of one kidney only, the changes are limited to it.

(b.) By producing circulatory changes in the kidney reflexly. A close relationship seems to exist between the deeper layers of the urethra, the prostate, and the trigone (the parts upon which operations are performed), and the kidneys. An intense hyperæmia, due to the irritation of the nerves of these parts, might, in extensively diseased organs, led to the arrest of the circulation, and death from suppression of urine.

(c.) By extension of decomposition from the bladder to the kidney, and irritation of the latter by septic products. As regurgitation does not occur, decomposition often remains long-limited to the bladder. Extension, perhaps, takes place along ropy mucus, lying as a cord in the orifice of the ureter, when this has become inflamed from other causes.

These views are shared alike by both Beck and Green. The statement that regurgitation cannot occur, is made by all authors treating of this subject, but I cannot refrain from stating, that, however true the statement may be, physiologically, I am inclined to doubt its applicability to some pathological conditions. When there is present so extensive a diseased condition as is found when the suppurative process has begun in the bladder, and the bladder has been constantly distended with gradually increasing force for lengthened periods, I believe that regurgitation *may occur*; and of this I am certain *that I have (post mortem) emptied the bladder through the ureter and kidney*. The ureter was, it is true, distended, and there was lacking the physiological contraction of the opposing muscular fibres in the vesical

wall, which, normally, it is claimed, forms the chief preventive to regurgitation. But, may we not ask, is there not this same lack of contraction in vesical paralysis? And is it not a noticeable coincidence that vesical paralysis and pyelo-nephritis are so frequently found associated?

Pathology.—The changes consist in the ordinary catarrhal process—the mucosa and sub-mucosa becoming very much thickened in old chronic cases, the vessels varicose and tortuous, the epithelium much changed by cellular proliferation. The kidney is more or less enlarged, is deeply congested and reddish, except certain wedge-shaped spots, yellowish-white in color, which extend through the cortex to the apices of the cones. On section, these patches show scattered points of suppuration; they are swollen, and the capsule is more or less adherent to them. Later on, suppuration occurs all along these patches. Between the tubules, several of these patches unite, and small abscesses form, which coalescing, form considerable abscesses, until all the kidney elements become broken down and separated and disappear, and the suppurative inflammation which began in the cones, has destroyed the cortical substance; and finally, nothing remains but a bag of pus, having irregular walls, marked by septa, which are the remains of former calices. This is, briefly, the most usual and true course of a progressive pyelo-nephritis.

In the stages of the many different forms which must, of necessity, occur in a diseased condition dependent upon so many, and such varied causes, the changes must vary from the most chronic productive inflammation to an acute suppurative process, such as has just been described. If the morbid processes began in the bladder, the evidence will be plain, and the ureters may, or may not, be affected by the same changes. It is well established that suppurative inflammations of the kidneys as elsewhere, are set up by putrefactive bacteria, and these bacteria may be found by the high powers of the microscope, arranged in parallel rows within the tubules, and also in

the interstices between the pus corpuscles. In the chronic forms we see the cellular infiltration irregularly distributed through the cortex and pyramidal substance. Some tubules are wasted, others lost, and still others blocked with epithelium. The walls of the small arteries are rarely thickened, and the kidneys somewhat enlarged, the capsule slightly adherent, the cut surface paler than usual, and of a tougher consistence than normal. Eventually, however, they break down and become contracted, and finally reach the condition described in the acute form of a pus sac. From these descriptions of the acute and chronic forms, pathologically, an accurate idea can readily be obtained of the course of the various intermediate forms, and further attention need not be given here. We will, therefore, pass to the consideration of the—

Symptoms.—The early stage of the chronic forms shows few symptoms indicative of the gravity of the condition, and on this account a diagnosis is rarely made before there has been a considerable advance in the diseased process.

The most constant and reliable symptoms, always present, but not perfectly reliable, because found also in other diseases, are, a frequent desire to micturate, pain, and the presence of pus in the urine. These symptoms are common to other diseases, but by carefully investigating their character, they can usually be readily differentiated from the same symptoms in other diseases and on a rational basis for diagnosis. This will be further explained when we come to consider diagnosis. Pain on motion of the thighs, with exacerbations after violent exercise, constant, dull, heavy pain in the lumbar region, the lack of relief afforded by micturition, tenderness on deep pressure, and the finding of many "tailed cells" and epithelial scales—the cells having the spindle-shape peculiar to the pelvis of the kidney—the presence of pus in the urine, all are symptoms which are reliable, and most of them constant.

In the more advanced, and in the acute cases, the symptoms are more marked, and the disease, consequently, more easily recognized. The presence of a tumor in the lumbar

region, more or less fluctuating, and changing in size at irregular intervals, a decrease being coincident with the appearance of pus in the urine, make a convincing group of symptoms. This diminution of size is not, however, invariably accompanied by the appearance of pus in the urine, for, at times, the pus empties elsewhere—sometimes in the intestine, when pus will appear in the stools; sometimes it burrows its way, following the direction of the least resistance, pointing sometimes in the inguinal region, sometimes in the perineal region, and, again, below Poupart's ligament. Cases are recorded in which the pus has penetrated the diaphragm and emptied into the lung, finding its way into the bronchial tubes, and being coughed up with the sputum. Where the disease process is limited to one kidney, the symptoms are less marked, or rather more difficult to group. When bilateral, there is less difficulty, as uræmia is quickly added to the symptoms already mentioned. There are throughout chills, at irregular intervals and of varying intensity, as the suppurative process increases or declines, and these chills, in the more acute and advanced stages, are noteworthy symptoms.

In the chronic cases, especially where the suppuration proceeds by slow stages, the chills are present, but are so slight, and, in general, so evanescent, as to render them of little aid in detecting the lesion—they being frequently overlooked by the patient unless attention is directed to them by the physician. The chills, as before mentioned, may be either mere flashes of heat and cold, or they may be of all the intermediate intensities up to decided and ague-like chills, followed by high temperature and accompanied by hectic flush.

The temperature is at times, though rarely, very high, reaching, temporarily, as high as 105° Fahr. It is apt to have evening exacerbations and morning remissions, due, doubtless, to the fact that active muscular movement fosters local irritation, and the nocturnal rest lessens the tendency thereto. Pain is increased by lying on the affected side, or on the back, if bilateral. Sensation is especially apt to show

disturbances, and the patient will frequently complain of numbness in the limb corresponding to the affected side, a formication, or "creepy feeling," and if the size of the tumor be sufficient to produce adequate pressure on the nerves, motion may be impaired, or even lost. When such a state occurs, there is, in connection therewith, diminution of the reflex at the patellar tendon, and also in the plantar reflexes, and the temperature as compared with the other limb is reduced. Where the suppurative products have burrowed, the pointing will attract attention, and we should be on the lookout for this in the iliac, inguinal, and perineal regions. Traumatic lesions (external) are evident, and need not receive further attention here. I find few cases of this kind recorded, and have never heard of one, except those which are consecutive to such traumatisms as operations upon other conditions elsewhere in the genito-urinary system.

Diagnosis.—To diagnose this disease one must not only recognize symptoms, but must group them, as there is no one symptom which is pathognomonic. There is one pathognomonic symptom, but it is not constant. The microscope is of incalculable value now, and by its aid we can be assured of our diagnosis. What can we see with the microscope? 1st. Pus; 2nd. Pus casts; 3rd. Bacteria; and 4th, and most important, as it is the nearest approach to a pathognomonic symptom, flakes or scales of spindle-shaped epithelial cells, peculiar to the renal pelvis, and commonly called "tailed cells." If found, and they are grouped in masses, conjoined, but distinctly lengthened, they can be from no other source than the pelvis of the kidney. Therefore when found and in connection with pus, this symptom is pathognomonic. It is because cases do occur in which they are not found that I say the microscope is not infallible. It is positive evidence to find them, but, at the same time, it is *not sufficient negative evidence not to find them*. This symptom, as a point in diagnosis, has been placed first, and thus dwelt upon because it is found in the earliest stages, and is therefore of the first importance. Pus in the urine,

or pyuria, is found in other diseases, and one must learn to differentiate between the purulent urine of pyelo-nephritis and that of cystitis. It was formerly held by the best authorities, and is even yet, that there were two reliable tests for this differentiation—

1st. That acid re-action of the urine indicates pyelitis or pyelo-nephritis, and an alkaline re-action, cystitis.

2nd. That in vesical catarrh, the purulent deposit was usually mixed with quantities of mucus, and always some mucus, while in pyelo-nephritis there was never a trace of mucus.

Each of these statements is equally fallacious, for, in chronic vesical catarrh of long standing, the urine is *generally acid*, and only becomes alkaline *after standing*, or *after retention*, for a certain length of time. The second statement is misleading because the mucous masses evacuated in the urine of some cases of vesical catarrh are the result of mucous transformation induced in the purulent secretion from the vesical mucous membrane by alkaline fermentation of the urine; and if the urine does not undergo this transformation or decomposition in the bladder, it will, when freshly passed, contain no mucous masses.

Again, if we leave urine containing a simple purulent deposit, when it comes from either the bladder or the pelvis of a kidney, in an open vessel, until it undergoes alkaline fermentation, the sediment will become tough and stringy and mucoid, so resembling true mucus as to be practically indistinguishable therefrom, either by chemical or visual tests.

Leaving these fallacious so-called tests aside, we can only be assured of the presence of disease in the pelvis of the kidney by finding connected groups of spindle-shaped, flat, "tailed" cells of epithelium in the urine and associated with pus. This can usually be found after violent exercise. It is only these cases of cystitis that we are likely to confound with pyelo-nephritis, and we need not dwell upon other conditions which have pus in the urine as a symptom; and I will only mention some of them, as cases of uncomplica-

ted urethral stricture, enlarged prostate, gonorrhœa, etc. These may all have pus in the urine, but all have characteristic symptoms which will prevent confusion with the graver disease.

In considering the symptom of pain, we may be more easily misled. The pain may be mistaken for lumbago, but in that disease there is less tenderness on pressure and more on motion. The pain is more constant, and of a different character; and, too, the history of the case and non-disturbance of urinary function would differentiate it. Hepatic and renal colic present similar pains, but in the former there are more symptoms to aid us. Renal colic is more puzzling in its similarity, but its characteristic remissions, the presence of sharp crystals and blood in the urine after a paroxysm of pain, the absence of pus, and the duration (attacks of real colic rarely lasting over 48 hours)—all, taken as a group, give us the separation from pyelo-nephritis.

For brevity and clearness, I will tabulate the distinctive differences from pyelo-nephritis of those disease which most nearly resemble, and, therefore, are most likely to be mistaken for it:

Pyelo-nephritis.

- 1st. Urine contains much pus and little mucus.
- 2nd. Pain most felt in lumbar region.
- 3rd. Pus casts in the urine.
- 4th. Tailed cells in the urine.
- 5th. Desire to urinate not relieved by the act.
- 6th. Affected kidney enlarged and tender.

Cystitis.

- 1st. Much ropy mucus and little pus.
- 2nd. Pain in bladder and penis.
- 3rd. No casts.
- 4th. No distinctive cells.
- 5th. Desire relieved by act.
- 6th. Kidney not enlarged.

Pyelo-nephritis.

- 1st. No profuse sweating.
- 2nd. Urine purulent.
- 3rd. Temperature not very high.
- 4th. No joint affections.
- 5th. No pulmonary symptoms.
- 6th. Affected kidney enlarged and tender.
- 7th. Pain localized.

Pyæmia.

- 1st. Profuse sweating.
- 2nd. Urine normal.
- 3rd. Temperature usually very high.
- 4th. Large joints affected.
- 5th. Marked pulmonary symptoms.
- 6th. Kidneys neither large nor tender.
- 7th. Pain not localized.

Pyelo-nephritis.

- 1st. Urine contains pus.
- 2nd. Tailed cells in urine.
- 3rd. Constitutional symptoms.
- 4th. Indistinct fluctuation.
- 5th. Aspiration withdraws pus.

Pyelo-nephritis.

- 1st. Urine purulent.
- 2nd. Renal tumor indistinct.
- 3rd. Pus casts and tailed cells in urine.
- 4th. No superficial signs of inflammation.
- 5th. Kidneys slightly tender on pressure.
- 6th. Little fluctuation.

Pyelo-nephritis.

- 1st. Recurrent chills and fever.
- 2nd. Diarrhœa not uncommon.
- 2rd. Typhoid course.
- 4th. Pus casts of renal tubes.
- 5th. Pus in urine inconstant.

Pyelo-nephritis.

- 1st. Usually one kidney affected.
- 2nd. Casts few, and covered with pus.
- 3rd. Large amount of pus at irregular intervals.
- 3th. Affected kidney enlarged and tender.
- 5th. Fever remittent.
- 6th. Pain localized over one kidney.
- 7th. No general œdema.
- 8th. Tailed cells in urine.

Hydro-nephrosis.

- 1st. Urine normal.
- 2nd. No distinctive cells.
- 3rd. General health good.
- 4th. Distinct fluctuation.
- 5th. Aspiration withdraws urine.

Peri-nephritic Abscess.

- 1st. Urine normal.
- 2nd. Renal tumor distinct.
- 3rd. Neither casts nor distinctive cells.
- 4th. Superficial tenderness and œdema.
- 5th. Kidneys painful on pressure.
- 6th. Distinct fluctuation.

Pyelitis.

- 1st. Rarely chills or fever.
- 2nd. No diarrhœa.
- 3rd. No typhoid symptoms.
- 4th. No casts.
- 5th. Pus in urine constant.

Acute Bright's.

- 1st. Usually both affected.
- 2nd. Casts abundant and epithelial.
- 3rd. Pus rare, and small in quantity if present.
- 4th. Kidney not enlarged.
- 5th. Fever slight, but continuous.
- 6th. The pain a general backache.
- 7th. Generally œdema of ankles.
- 8th. No tailed cells

These tables are brief, but definite, and give a better view from a diagnostic standpoint than could be given in any other way. Enlarging in detail would merely confuse—so that, before passing on to the clinical course, I will only add that—given a case with these symptoms,—pain in lumbar region, intermittent in character, and increased by exercise, with irregular slight chills and flashes of heat, tenderness over the kidney, and pus and pus casts in the urine, with the presence of tailed cells—and you have a

case of chronic or sub-acute pyelo-nephritis. Add to these a tumor in the lumbar region, more or less fluctuating, from which the aspirator withdraws pus—and also an increased severity of the chronic symptoms, and we have an acute or an advanced case of the same disease.

Clinical Course.—This can be best described by citing the history of cases, and the following are very good ones for the purpose; so they will be given, though as briefly as possible:

CASE I.—L. M. T.; male; age 46; a mine boss; married, and has four children; drinks regularly, but not to excess; health has always been good until about four months before applying for treatment; during that time, has been troubled with a dull, aching sensation in the right lumbar region; at times, the pain is increased, especially after a hard day's work, or after riding on horseback; pain is increased by lying on the right side; there was some tenderness upon deep pressure; no tumor noticeable; urine normal in quantity; examination showed a large proportion of phosphates, but no albumen; microscopic examination negative; ordered diuretic treatment, with local counter-irritation; patient reported that the urine was always muddy after one of the exacerbations of pain, so was told to bring a specimen at such a time.

Four days later, he appeared with a specimen, which was very muddy, and which contained a small amount of albumen and some pus. The microscope showed an abundance of pus corpuscles and a few pus casts. Treatment continued. Six months later, the patient began to lose flesh, and became nervous. Pus appeared in the urine in great quantity. He had chilly sensations, and, at times, a hectic flush, though there was no great rise in temperature. Upon examining the urine again, microscopically, found scales of tailed epithelium, a few pus casts, and quantities of pus corpuscles. Examining the patient carefully, discovered an indistinctly fluctuating tumor in the right lumbar region. This I supposed to be the kidney. On consultation with another physician, it was agreed that it would be advisable to test by aspirating, which was done, the aspirator withdrawing a peculiarly foetid pus. An eminent surgeon was called in. He confirmed the diagnosis, and advised an operation, as the patient was rapidly losing flesh and strength. The patient agreeing, he operated, removing the

right kidney, which was almost entirely destroyed, being little more than a sac of pus.

Patient made a good recovery, regaining his former health and strength, and resumed his business, which he has followed without any trouble up to this date (four years later)

CASE II,—G. T. G.; age 48 years; a manufacturer; drinks excessively; is an intelligent man, and gives an unusually clear account of his case; applied for treatment because he felt sure that there was something serious the matter with him, although he had always been healthy so far as he knew, and was still able to attend to his business. He gave the following history:

For the last twelve months he had been suffering more or less constantly with a dull, aching pain in the back; this, at times, was very severe, and for a week at a time he would suffer agony; then, usually, after some exertion, there would be a sudden relief, and always there was, at time of relief, an appearance of very muddy urine. The urine would be more or less muddy for several days, and it would be several weeks before he would again be troubled with severe pain, though he was rarely entirely free from the dull aching in the lumbar region. The urine would be more or less muddy for several days at a time without pain, but there was never so great a quantity as after one of the paroxysms. An examination of the urine, at intervals of several days, made the diagnosis positive, and appropriate internal treatment prescribed. A few months showed that this was of little benefit, and an operation was advised. This the patient refused; and he has since been treated as well as possible internally, with the result that the suppurative process seems to be, to a certain extent, controlled; but the general health of the patient was growing worse when I last saw him, and unless he consents to an operation, the result will probably be fatal.

To these two cases I will add the following, which is of peculiar interest, from the fact that the renal condition was not recognized until after death:

M. B., female, age 65, came to my notice for treatment for an ovarian cyst, enormous in size, which had pressed the diaphragm up to a dangerous level, and caused enormous distension of the abdomen, the walls being stretched almost to the thinness of paper. Patient much emaciated, and, on account of her inability to retain food, was weakened terri-

bly. She refused to allow either tapping or ovariectomy, either of which would have been extremely hazardous, and died from exhaustion in about three months.

Post-mortem showed that the sac originated in the right ovary, and contained about 42 pints of fluid. Further examination showed that the right kidney was almost entirely destroyed, and filled with pus; the cortex being only one-sixteenth of an inch in thickness. The other kidney was enlarged and lardaceous, and the condition of the kidneys alone would have been sufficient to account for death. The enormous size of the ovarian tumor withdrew the attention from, and prevented the recognition of, the renal trouble.

Prognosis.—In a disease subject to such varied phases, the prognosis depends almost entirely upon—1st, how early the disease is recognized; 2d, how far the disease process has advanced; and 3d, whether one or both kidneys are affected. Where the disease is recent, and not very acute, the prospect of amenity to treatment is much more favorable. The same may be said when only one kidney is diseased. This, however, refers to the immediate and not to the remote prognosis. The latter is always grave, owing to the almost certain development of one or another disease in the other kidney. Owing to the insidious onset of the disease, and consequent difficulty of recognition, the greater number—I might almost say, all of the cases with which we will meet, will be so far advanced as to render the prognosis most grave. The condition of the general health must, of course, be considered, these patients being, as a rule, much debilitated. Still, if the health be good in other respects, the prospects are favorable. The frequency with which we will meet with the characteristic kidney post mortem, proves conclusively, that many cases of chronic character are borne well by the organism, especially if the trouble be unilateral, and borne, too, without recognition, the healthy kidney being capable of performing, unaided, the function usually devolving upon two. The prognosis, then, when only one kidney is affected, may be said to be usually favorable. Great debility, advanced disease, bilateral lesions, and uræmia, make the prognosis as fatally positive, as it is positively fatal.

Treatment.—In considering how we can best treat a case of pyelo-nephritis, much will, of course, depend upon how early in the course of the disease recognition has been made. If in an early stage, before suppuration has advanced, much can be done, more especially if the disease is dependent upon such irritative causes as the excessive use of stimulant diuretics, or from thermal causes. In such cases the first duty, of course, is to stop the irritating drugs. The second, to soothe the irritated parts, which can best be accomplished by the use of diluents, or such drugs as will increase the outflow of urine without in any way irritating the already sensitive tissue. It might be thought proper to introduce here, the diuretics in general use. To do this would only fill space, and add to the confusion of the reader, so without increasing the prolixity of this paper by the useless repetition of the names and supposed properties of each member of the hydra-headed diuretic field, I will content myself with the mention of a few which are reliable and prompt, and which are named in the order of their individual merit, in so far as my own experience dictates.

1st and best—*water*. Carlsbad, Vichy, the Lithia, and other mineral waters are all much lauded, and each is possessed of individual merit; but good, pure freestone water is effective, inexpensive, and pleasant to take, and should always be tried before resorting to the others. Of the mineral waters, lithia is by far the most efficacious.

2d. *Strophanthus* (tincture). This is prompt, effective, and non-irritant, the smallness of the dose (gtt. viiss to x.) preventing the administration of sufficient alcohol to cause irritation. It is also a good heart stimulant.

3d. *Acetate of potash*, well known, reliable, bland, and effective.

4th. Spirits of nitrous ether, equally well known and soothing.

These four diuretics are sufficient to do all that can be effected by medication in the line of diuresis. In addition to the soothing effect of diluents, we must give tone to the weakened coats of the vessels, and nothing does this more satisfactorily than ergot, given in the form of the fluid extract, ʒss. every

six hours. Gallic acid is of much benefit in constricting the dilated vessels, it being excreted unchanged in the urine, and thereby reaching in an active state all portions of the renal substance.

The cessation of pus formation is naturally to be desired. When suppuration has only just begun, this is frequently possible by the use of a drug which is, to a certain extent, empirical—as we do not know its method of action. The sulphide of calcium in doses of from one-tenth to one-third of a grain. Notwithstanding our ignorance of its mode of action, the fact remains that it does frequently put an end to suppurative processes here and elsewhere. In a more advanced stage, the pus can be more easily and certainly gotten rid of by aspiration. When this is done, the best effects have been gotten by the use of antiseptic washes of corrosive sublimate in solution. Whoever has seen the magical effect of peroxide of hydrogen upon suppurative processes, when locally applied, must be convinced of its especial adaptability to cases of this kind; and, while the author has never heard of its being so used, he has no hesitancy in prophesying the best results from its use. Counter irritation is almost always resorted to for the relief of pain; but knowing the pathological condition, it is not surprising that little or no benefit is to be derived even from the most pronounced forms of such treatment. This being said, about all has been said in the way of medication. When the disease has made some headway, as in reality it will always have done before it is recognized, medicaments are of no avail.

A disease, dependent, as this is, upon surgical causes, frequently, and almost always upon troubles of a surgical nature, demands surgical treatment. Here, the old maxim, “remove the cause, and you remove the effect,” is at fault, for, the cause is often remote, and after its removal, the effect still remains. For example, when the renal condition originated reflexly from a cystitis, the cystitis may be entirely relieved, but the pyelo-nephritis is still there; therefore we must remove not only the cause but the results. The only thorough way, and therefore, the only proper way to accomplish this is by the removal of the pus, or both pus

and kidney. Where it is possible, and the disease process has not reached too advanced a stage, the pus can be removed by aspiration, as mentioned above. But, as the disease has usually gone so far as to almost entirely destroy the renal substance before we have been called upon to treat it, the knife gives the best results. Statistics go to prove that where there is a renal calculus, or when the renal substance must be incised, nephrectomy is to be preferred to nephrotomy, for the following reasons: 1st, because of the greater ease with which the ligations are made; 2d, the certainty of removing all diseased tissue; 3d, from the fact that the external wound need not remain open and subject to infection; and 4th, and not least worthy of consideration, is the fact that the death rate in nephrectomies is less than in nephrotomies.

It would be out of place to enter here into a prolonged and detailed description of the operations for reaching the kidney, as that would necessitate the introduction of an array of anatomical technicalities, which, instead of aiding, would confuse. I will then only give briefly the methods of reaching the kidney.

1st. From the lumbar region. In this way we may open abscesses, remove calculi, and even extirpate, if the kidney be not too much enlarged. Increased room may be obtained by removing the twelfth rib. By this method we gain efficient and dependent drainage, and we need not open the peritoneum.

2d. As in an ordinary laparotomy, making an incision in the median line. This admits of our examining both organs, and, to a large extent, determining the condition of each. We get free access to, and can more readily treat the pedicle and the ureter. In this way we must open into, and again divide the peritoneal cavity, but our incisions are readily closed, and, while it is to be avoided when possible by substituting the first-mentioned operation, we no longer dread, as we formerly did, the opening of this huge lymph sac. For large tumors, solid in character, this method is clearly indicated.

3d. The method proposed by Langenbuch, of making the

incision along the outer border of the rectus muscle, which he claims to present advantages in certain cases, but which has received little support, and has not, so far as I know, been tried, even by the distinguished author who suggested it.

These operations are of course only indicated when the lesion is unilateral. Bilateral cases are rare, and cannot be benefitted, being necessarily rapidly fatal. Besides the operations for the relief of pyelo nephritis, when the diagnosis is positive, there should be no hesitancy, in either aspirating or making an exploratory incision, if necessary to assure us of our diagnosis, if the facts are sufficient to warrant suspicion of its presence. The operation is not a hazardous one, and while I do not wish to appear as countenancing the indiscriminate opening of the abdomen, as has been the vogue of late, I cannot but protest against the lack of courage which deters even our best men from meeting the occasion when it does arrive. Delay is dangerous, and tentative efforts at medication when the vital powers of the patient are evidently waning under such efforts, make a most deplorable delay. Hesitate until the diagnosis is made, but after that, *never*.

NOTE.—In preparing this article, the modicum of originality has necessarily been intermingled with a preponderance of quotations from standard authors. These quotations are, few of them, sufficiently literal to be placed in quotation marks; so I give below a list of references, which will enable the reader to find the ideas so used, together with much interesting matter which, but for its bulk, would have been embodied in this article.

REFERENCES.—GROSS' *System of Surgery*; *Genito-Urinary Diseases*. Gross; *System of Medicine*, Pepper; *Clinical Diagnosis*, Da Costa; *Clinical Diagnosis*, Finlayson; *The Practices of Medicine* of Bartholow, Neimeyer, Wood, Flint, and others; *Examination of the Urine*, Tyson; *Rindfleisch's Pathology*; *Green's Pathology*; *Cutler's Differential Medical Diagnosis*; *Delafield's Pyelonephritis*; *Wythe's Microscopist*; *Dunglison's Medical Dictionary*; and articles in the *Lancet*; *Medical and Surgical Reporter*; *New York Medical Journal*; and others by Beck, Langenbuch, Keen, and White.

*Clinical Reports.***(I) Cystic Degeneration of the Thyroid Gland. (II) Fungating Hæmatomæ.**

By GEORGE FOY, F. R. C. S., etc., of Dublin, Ireland.,

SURGEON TO WHITWORTH HOSPITAL, DRUMCONDRA, ETC.

(I) Cystic Degeneration of the Thyroid Gland.

In the month of August, 1885, I was consulted by a young married woman about a swelling in her neck, which was not only unseemly, but interfered with her swallowing and breathing.

She had none of the concomitants of Graves' disease; her heart was regular in action and not unduly quick, and her eyes were not at all prominent.

On examination, I concluded that the case was one of cystic enlargement of the right lobe of the thyroid gland. One large cyst extended from above the hyoid bone to close upon the manubrium of the sternum.

After consultation with the patient and her husband, operation was decided on, and my decision was for the extirpation of the right half of the gland. Unmistakable fluctuation could be detected in the tumour, and for a moment I thought of aspiration, puncture with trocar and canula, passing a seton, and injections of some one of the many styptics; but in my opinion their disadvantages outweighed their advantages.

As from the earliest days of surgery free bleeding is one of the great risks of operations on this gland, I carefully considered all the usual precautions, taken to prevent the too great loss of blood. The fact that the patient was two months' pregnant appeared to me no objection to an operation being performed, but it appeared to point to the necessity of the operation being as quickly completed as possible; therefore I decided against any preliminary operation for preventing the loss of blood, such as tying the isthmus of the gland, or ligaturing the thyroid vessels.

The operation commenced by a long, straight incision paralld to, but a little to the right side of the medial line, and very soon the cyst was laid bare, when it bulged into the wound; the whole side of the thyroid gland seemed absorbed by this oval cyst, and after separating it from its surroundings with my finger and the handle of the knife,

I, with a few touches of the blade, freed it from its attachments, and lifted it out. Until that moment not two drachms of blood were lost, but now a torrent of bright arterial blood poured out, and from the upper angle of the wound jets of bright arterial blood shot in every direction; very competent assistants stayed the current with sponges, and with Lawson Tait's forceps I caught more than forty arteries; the wound was encircled by the protruding handles of the forceps, but the bleeding seemed in no way diminished; a gentleman assisting who has had fifty years operative experience, declared it to be the most dreadful bleeding he ever saw.

Nothing now seemed so suitable for staying the blood as plugging the wound with fine, new Turkey sponges. Relieving some of the forceps that would have interfered with the method, I passed a finger down to the vertebræ, and packed in fine aseptic sponges. I then, with four entomological pins, transfixed the skin, and lapped strong silk in figure of eight loops over them. The patient was now put to bed, and soon had quite recovered from the effects of the chloroform. In five days I removed the sponges and the last of the forceps; dusted the surface with iodoform, and dressed with an ointment of boric acid, compound benzoin tincture and benzoated lard.

The iodoform had to be discontinued, as it produced purging.

One month after the operation the patient returned home. She carried her child the full term; had a good confinement, and has remained in good health ever since.

Where, as in this case, a great many small vessels are bleeding, and when they are obscured by being well covered with blood, I think sponge plugging, the sponges being well kept in place, is better than a tedious hunting out of the bleeding points artery by artery. In this case its results were most favorable.

(II) *Fungating Hæmatomæ.*

In Ireland fungating hæmatomæ are unusual; nevertheless they occasionally occur, and it has been my luck to meet two cases of the disease.

The first case was that of a Mrs. G., the mother of a family of five children, all of whom are healthy.

She came under my care August, 1885, with a small

tumour, which grew from the molar eminence of the left cheek. It was painless, but she desired its removal because of its rapid growth, and the fact that medicines she was taking and the applications applied to it by her family medical attendant, had not had the desired effect.

At her request, and with the consent of her husband, the tumour was removed. The operation entailed no trouble, and the wound healed quickly, so that in a few days she returned to her home in the country.

Very soon afterwards a fresh tumor made its appearance a little below and in front of the cicatrix of the operation. She revisited Dublin, and again the tumor was excised. She lived in one of the most beautiful and lovely places in Ireland, and enjoyed, until the tumor appeared, the best of health; and except for the mental anguish the return of the growth caused, she suffered nothing.

Finding she would have to return a third time to the city, she now decided to reside in it, and a third time she requested me to operate. The growth of the tumor had now been very rapid, and in a month it had attained the size of a closed fist. The removal of the lump was in no way difficult, and the amount of the bleeding was very slight considering the vascularity of the growth.

Ultimately the mass attained a large size, and was, as before, removed, until I had from first to last excised fourteen fungoid tumors, all of which were, on examination, shown to be fibroid in structure. From first to last the mucous membrane of the cheek remained unaffected; the surface of the mass bled freely from time to time, and the bleeding, which was principally venous, was only controlled by dusting powdered perchloride of iron over it.

Near the end of the patient's life, large masses of the tumor would, from time to time, become so loose that the merest touch caused them to fall off. At last, worn out with mental agony, and the exhaustion from loss of blood, the patient died.

The next case of the kind was that of Mrs. R., aged forty-four years; the mother of four children. In the first week of June, of this year, I visited her at the request of my friend, Dr. Cowl, of this city, who told me that for some months the patient complained of a swelling in her right breast; that latterly it had perceptibly grown larger, and finally the skin had yielded, over the most prominent part of the tumor, and a plum-sized and colored mass had protruded; this little lump broke in a few weeks' time, and the

bleeding, which was venous, was very wicked, and was restrained with difficulty.

The patient was a large, heavily fleshed woman, with raven black hair, and of a most impatient temper.

She positively refused to allow any surgical interference with the tumor, which when, I first saw it, was about the size of a baby's head, and growing rapidly. After careful examination and consultation with Dr. Cowl, I recommended her strongly to come to hospital, and submit to operation. Very emphatically she refused to go to hospital, or submit to operation; but on the second of July, so rapid was the growth, she came to the Whitworth Hospital, Drumcondra.

At first she would not hear of an operation, but on the eighth, she consented to allow me to remove the breast, giving me the comforting news that she had a premonition that she would die in the operating-room, and that out of the influence of chloroform, she never would get.

Prior to her leaving her ward, I persuaded her to take an ounce of brandy and some water, and in due course she went well under the influence of the chloroform. The mass that soon protruded from her breast was very large; it was fully as large as a man's head, and as she lay on the operating table, an unconscious touch from some of the lookers-on, caused the whole lump to fall out, leaving a large cup-shaped cavity extending down to the pectoralis major.

As she was now well under the anæsthetic, I rapidly exposed the breast, and laid bare the healthy muscle tissue underneath. Strange to say there was no vessel worth mention cut; a large number of petty ones were twisted, and the tumor must have been fed from that.

The gaping wound was large, and I put three entomological pins across the broadest part of it, and approximated the skin by strong silk in figure of eight laps from pin to pin; the angles of the wound were brought together by silk sutures. Over the surface of the wound I dropped compound tincture of benzoin, after it had been washed with glycerinate of boric acid, and as a dressing, I applied, lint spread with the following ointment:

R̄—Acidi borici	℥j
Adipis benzoati.....	℥j
Tinct. benzoin comp	℥j—M.

Ft ungentum: An ointment which gives best results. A

glass drainage tube having been inserted into the wound and the part covered with well teased out tenax, the patient was bandaged up, got some more brandy and water, and put to bed.

The night before the operation her temperature stood at 102.6° Fahr., and the night of the operation it was normal. On the third day her temperature rose, and the wound did not smell sweet. I undid the dressing, and found a very free discharge of unhealthy matter from the axillary angle afterwards and the drainage tube blocked with a similar substance. Having cleared the drainage tube and put in a new one, I dusted the wound with aristol, and reapplied the dressings. The temperature, however, continued high, and the patient's stomach commenced to reject food. I now put her on Valentine's meat-juice and some dry champagne; the stomach quieted. I should say that she could not take quinine in any form, and that she suffered from a weak heart, so that the use of the synthetic antipyretics was excluded.

No attempt at healing was made by the wound. Where the pins and ligatures penetrated the skin, sloughs appeared, and the tissue fell out, leaving a circular hole of a punched out appearance. With an insufflator aristol was freely dusted over the raw surface, and the ointment applied. Gradually the wound granulated, and on the 19th of August she left hospital.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

Correspondence.

The Use of Spinal Revulsives.

Mr. Editor,—I wish to call attention to the value of “spinal revulsives” when there is pain in any of the viscera (stomach, intestines, uterine appendages, etc.,) especially when you can get tenderness on pressure over the corresponding vertebra.

My attention was first called to this plan of treatment by an article in the *Virginia Medical Monthly* from Dr. Henry F. Campbell, of Augusta, Ga., entitled “The Wide-Spread Influence of the Cerebro-Spinal Centres over the Ganglionic Plexuses.” I will also quote that no less an authority than Anstie points out that blisters applied over the seat of pain aggravates the suffering; “but on the other hand, if they are applied to a posterior branch of the spinal nerve trunk, from which the painful nerve issues, a reflex effect is often produced of the most beneficial character.” I will simply give a few cases as illustrative of their value.

CASE I.—Young colored man, age 22, suffering from very severe pain in left side, between navel and groin. On examining spine, I found considerable tenderness over two or three of the corresponding vertebræ. I applied a revulsive in the form of a mustard plaster to the tender vertebræ with permanent relief.

CASE II.—Woman, aged 28, violent pain in left groin, over the region of the ovary, with great tenderness—symptoms of a typical case of inflammation of the tube and ovary. Applied a blister to the corresponding vertebra. Although there was no tenderness in this case, there resulted almost entire relief from pain for several days. Previous to this she had been blistered over the ovary without benefit.

CASE III.—Mr. E., a soldier; violent attack of acute indigestion. There was considerable gastric flatulence, vomiting, etc. On examining the spine, I found considerable tenderness between the shoulders. I applied mustard plasters to the stomach and to the tender vertebræ between the shoulders, which gave permanent relief.

CASE IV.—Mr. R., a soldier; severe case of hiccough,

which had lasted him for over a day. Applied blister to tender vertebræ opposite the diaphragm with permanent relief.

I could give other cases, but think these are sufficient to show the value of "spinal revulsives." I have made it a rule in all of my cases of dyspepsia or indigestion, flatulence, cough, neuralgias of the stomach, chest, etc., to use some form of spinal *revulsive*, and in the majority of cases with very good results. For even if there is no tenderness over the corresponding vertebra, "it does good anyhow," as the old negro woman said when she spanked all her children every Saturday night, "You hain't done nothing bad to-day, but you're gwine to do it, and a licken's good for you anyhow."

ALEXANDER IRVINE, M. D.,

Resident Surgeon Soldiers Home, etc.

Richmond, Va., October 10th, 1891.

Proceedings of Societies, Boards, etc

MEDICAL SOCIETY OF VIRGINIA.

The Twenty-Second Annual Session of the Medical Society of Virginia convened in Lynchburg, Va., Tuesday night, October 6th, 1891, and adjourned Thursday night, October 8th, after which a magnificent banquet, tendered by the local profession was enjoyed. In all, there was an attendance of about 200, including a delegation of three from the Virginia Pharmaceutical Association. Among those present from other States were Drs. T. D. Crothers, of Hartford, Conn., A. M. Phelps, of New York City, Chas. H. Shepard, of Brooklyn, B. A. Watson, of Jersey City, Wharton Sinkler, of Philadelphia, H. P. C. Wilson, Thomas A. Ashby, and J. J. Chisolm, of Baltimore, I. S. Stone and Jos. Taber Johnson, of Washington, D. C., Geo. H. Zimmerman, of Cranberry, N. C., George T. Vaughan, U. S. Mar. Hosp. Serv., Evansville, Ind., etc.

Dr. Wm. W. Parker, of Richmond, Va., the President, presided over each meeting of the Session. Dr. H. Gray Latham, of Lynchburg, delivered the Address of Welcome.

The "Address to the Public and Profession" was delivered by Dr. C. M. Blackford, Jr., of Lynchburg, who, in a scholarly manner, discussed the problems arising in the consideration of the subject, "*Medical Education as it Was; as it Is, and as it Should Be.*"

Honorary Fellow, Dr. Rawley W. Martin, of Chatham, Va., who has been for years a member of the Medical Examining Board of Virginia, read a valuable statement of

"The Mission and Methods of the Medical Examining Board of Virginia."

Prior to 1885, no other requirement than the payment of an annual license to the State and county or city in which the party resided was made of any to entitle him or her to assume the responsibilities of the practitioner of physic. Of course the State was infested with quacks and charlatans who preyed upon a credulous and unprotected public. Since 1885, however, Virginia has become almost completely rid of such impostors and pests; and in a few years, as soon as the few remaining ones, who obtained licenses prior to 1885, die out, or are driven away by the invasion of educated physicians and surgeons, none can remain within her borders. Another most salutary effect of the law, witnessed on every hand, even after the lapse of seven years, is that it has stimulated young men entering the profession to greater effort and to higher and nobler aims. And this higher education required of the young men entering the profession has stimulated the older doctors to renew their studies, and has compelled them to keep up with the advances in the medical sciences in order that they may not be outstripped by the younger doctors. Even the public is now recognizing that doctors *must* be learned in medicine before they should be patronized. Another good to the country at large resulting from the initiative steps taken by the Virginia Board is that the Colleges are doing better work; they are making greater efforts to prepare their graduates to meet the requirements of the law. Hence, as a rule, graduates turned out by the Medical Schools of today are better qualified than ever before. When this Board was organized, it was deemed by some Colleges as scarcely more than a form for admission to practice. But they soon learned better. The statistical fact that 138 of the total of 460 applicants for license have been rejected to date since the organization of the Board, January 1st, 1885, shows that the Colleges were not careful as to whom they granted di-

plomas. He then detailed the methods of examination adopted by the Virginia Board.

The Committee appointed to Examine the Essays presented for Dr. Hunter McGuire's Prize of One Hundred Dollars, for the best Original Essay prepared by any member of the State Medical Societies of Virginia, West Virginia, or North Carolina, reported that, in their opinion, none of the essays received was entitled to the prize. The subject was "Pyelo-Nephritis."

The subject selected for the Dr. Hunter McGuire's Prize Essay for session 1892, on same conditions as heretofore, is *Tetanus*.

During the *second day*, Dr. J. F. Winn, of Fork Union, Va., Chairman of the Committee, appointed last year to report this session on the proposition to dispense hereafter with Reports on Advances in the several departments of medical sciences, and to substitute some other form of papers, reported in favor of doing away with the said reports which cannot be more than reiterations of things recently published in the medical journals, etc. In lieu of such reports, the President is to appoint fifteen Fellows, each of whom is to prepare and read an essay or lecture upon some subject of his own selection, to be made known to the Secretary, and by him announced to each member of the Society within the first three months after the adjournment of each annual session. The report was adopted.

The President, Dr. Wm. W. Parker, of Richmond, Va., had his *Address, as President*, read for him by Rev. Dr. Lambeth. It was classic in style, rich in research, and reviewed the histories, especially of St. Luke and Jenner as Medical Men, showed how much of the grand discoveries of modern day practice had resulted from their teachings, etc.

Acute and Chronic Dysentery

Was the subject for general discussion. The leader, Dr. P. B. Green, of Wytheville, Va., presented a paper detailing the most recently accepted doctrines regarding dysentery—dealing with it mostly as septic disease in its origin, and requiring generally an antiseptic course of treatment.

Dr. Wm. J. Crittenden, of Unionville, Va., spoke of its frequency during the Civil War in both the Union and the Confederate Armies. As to sections of this country, it exists as a fatal disease as 1 : 1000 population on the Pacific coast; 10 : 1000 on the Atlantic Coast; and 21 : 1000 along the Mississippi river and its tributaries. It is a disease whose habi-

tat is in the warm climates where the soil furnishes a nidus for the dysenteric germ. The different forms of dysentery are then described as to their anatomical and clinical histories, etc. Peritonitis, perforation of the intestine, perityphlitis, intussusception, liver troubles, etc., are spoken of as complications. And then the various modes of treatment are detailed—prophylactic and curative—without, however, bringing a new drug into the list or without claiming for an old one a new virtue.

Honorary Fellow, Dr. Bedford Brown, of Alexandria, Va., read a paper of great value on *Dysentery Viewed as a Septic Disease, and Treated Principally by Antiseptics*. The septic forms have been designated by such names as malignant, the typhoidal, camp, jail and famine dysentery. It is most often produced by foul conditions of food, water or air, as illustrated by epidemics during the war. In other words, in one of its two commonest forms, dysentery is a septicæmia from materials inhaled or taken. This malignant form is always serious—the mortality ranging from 25 per cent. to 75 per cent. Prevention consists in absolute and continuous cleanliness (or asepsis) of the water we drink, the food we eat, the air we breathe, etc. Viewing all severe cases of dysentery as septic, Dr. Brown begins treatment with a cathartic dose of calomel, followed by Epsom salts, to cleanse the entire alimentary canal of septic matter. This is followed by an antiseptic douche, consisting of carbolic acid, \mathfrak{z} ij in two pints or more water. After the intestinal canal is cleansed, then use an enema of laudanum, \mathfrak{z} j, as an anodyne. He then prescribes:

R _x .—Acid. sulph. aromat.....	\mathfrak{z} ij
Aq. menth. piperit.....	\mathfrak{z} iiij
Magnes. sulph.....	\mathfrak{z} ss
Aquæ.....	\mathfrak{z} iiij
Syrup. aurant.....	\mathfrak{z} j
Tinct. opii deodorat.....	\mathfrak{z} ij

M. S:—Tablespoonful every three hours.

An occasional full dose of salts maintains the cleansing process, and also changes the character of the secretions and relieves engorgement and inflammation.

If the disease progresses, then a more decided antiseptic course is decided on. Five grains each of naphthalin, salol and phenacetin are given every three hours; and the intestinal canal is irrigated twice a day with creolin. If genuine adynamic symptoms do supervene, and the discharges

consist of intensely offensive blood, mucus, pus and sloughs, indicating putridity, there is no local antiseptic equal to peroxide of hydrogen—a douche of one or two ounces to the pint of water, by destroying the infectious properties of pus, deodorizing putrescent matter. Sustaining measures must be used, such as a diet of eggs, milk, rum, brandy, cream and sugar, and liquid beef peptonoids. If tendency to collapse sets in, give $\frac{1}{100}$ th grain of atropia, the same of strychnia, and of nitroglycerin, every three hours, with hypodermics of caffeine. In adynamic cases, irrigations with solution of ichthyol in mucilage— $\frac{5}{8}$ j to pint—are useful. In malignant hæmorrhagic forms, give

R _x .—Opium.....	gr. ss
Tannin.....	gr. iij
Strychnia sulphate.....	gr. $\frac{1}{50}$ th
Iodoform.....	gr. j
Creosote.....	gtt. j

M. S:—Take above every two or three hours. Also give an emulsion containing spirits turpentine $\frac{3}{4}$ ss to the pint.

The lesions of *chronic dysentery* should be considered as wounds caused or maintained by septic influences. Every hour of the day septic faecal purulent and sanguinolent matter passes over the inflamed, ulcerated and eroded surface of the intestine as a never-ceasing poison. In treatment, use absolute cleanliness by washing out the intestines by means of the douche—simple tepid water irrigations; then use from half gallon to a gallon of water containing in solution peroxide of hydrogen, creolin, or ichthyol twice daily. This cleansing-out process and disinfectant action protects the lesion from that internal septic influence that keeps up ulceration, and in that way promotes healing. A soft rubber tube of about fifteen inches length, connected with a Davidson syringe, inserted into the colon, is the most efficient means of irrigation.

Honorary Fellow, Dr. J. E. Chancellor, of University of Virginia, spoke of the special virtues of the Rockbridge Alum Springs Water in the treatment especially of chronic forms of dysentery, instancing some very remarkable cases and results.

Dr. R. I. Hicks, of Warrenton, Va., stated that the treatment of irrigations with antiseptics, had not produced happy results in the few cases in which he had used them. The distension caused pain, and therefore, to that extent, were harmful. In chronic dysentery, which, in the main, is a

condition of ulceration, irrigations might distend the ulcer, which result, to say the least, could do no good. He believed that most deaths had been caused by the locking up of fecal accumulations with opium. The regular and proper removal of such accumulation brought most relief, prevented septic poisoning, and led to more cures than any other plan of treatment. He used opium to promote sleep, but generally associated some proper laxative with it. In this way, he treated last year thirty-three cases with no death; whereas he held a report of fifteen cases treated with irrigations and one death. He does not think this fatality commends the irrigation treatment.

Dr. D. A. Langhorne, of Lynchburg, Va., endorsed the position taken by Dr. Hicks. Calomel is nearly always *de trop*, and opium is positively harmful in suppressing the legitimate and always benign efforts of nature. He thought Dr. Chancellor had very properly claimed curative qualities for the Rockbridge Alum Springs Water in the treatment of chronic dysentery—especially in those cases having a pale, flabby tongue.

Dr. Herbert M. Nash, of Norfolk, said that he had been partially anticipated by the speaker who preceded him, in what he was about to say, to-wit, that in the three very thorough papers read this evening, the *multiplicity of remedies* recommended, in the treatment of dysentery, had a tendency to bewilder the hearer. His own experience had led him to rely on *two leading remedies* in the treatment of dysentery, after the preliminary evacuation of the intestinal tract by salines—the *bichloride of mercury* and *ipecac*.

The former he prefers in the treatment of the dysentery of children, but sometimes he uses it with the happiest results also in the cases of adults. He gives the bichloride in watery solution in doses of from one hundredth to one-sixtieth of a grain, hourly until the bloody, slimy dejections are followed by yellow, watery stools, with more or less diminution of the tenesmus, when this medicine is suspended, and a bismuth or chalk mixture, with or without the addition of some of the vegetable astringents, substituted. Enemata of a few drops of laudanum in a small quantity of thin starch, sweet oil or melted lard are given when needed to lessen the severity of the tenesmus, and sometimes also, he uses an enema of a few fluid ounces of alum water of the strength of sixty grains to the pint.

In the administration of *ipecac*, he has usually followed the plan of Ewart, the drug being given in large doses once

or twice in twenty-four hours, until feculent, bilious, or ipecac stools occur, which usually follow in from eight to twelve hours after the dose is taken. These stools are generally followed by rest, and greater or less freedom from tormina and tenesmus. The patient should avoid the ingestion of fluids for an hour or two before and after taking the dose of ipecac. For an adult, twenty to thirty grains usually suffice, given in a small quantity of orange syrup and water, or in capsules. Vomiting sometimes, though not invariably, occurs, and belching and nausea were usual for a time. The dose should be repeated, if vomiting takes place, within half hour or an hour.

He gives as little opium as possible, and when compelled by the intense straining with pain to use it, gives it per rectum. The use of large doses of ipecac as described may be reinforced during the interval by bismuth, bicarbonate of soda, camphor, etc., with hyoscyamus in preference to opium, as an anodyne, and external applications of sinapisms, turpentine, etc., may also be used.

This plan of treatment will generally succeed, a failure perhaps only occurring when there are pathological changes present, or other complications which would render any plan of treatment unsuccessful. If instituted *ab initio*, such changes will rarely occur.

If the ipecac treatment for the dysentery of children is decided on, it may be given in doses of two grains for a child one year old, adding a grain for each additional year of age, administered with a little soda, or bismuth with syrup, avoiding, as before mentioned, the free use of fluids for some time after taking the medicine. The ipecac being only necessary once or twice in twenty-four hours to produce its specific effect in changing the nature of the discharges from the bowels, the intervening hours may be devoted to the administration of nourishment of suitable nature and quantities; and if any of the milder remedies already mentioned, such as bismuth mixtures alone or with the addition of such astringents as catechu, kino, rhatany, etc.; but avoiding opiates as much as possible.

Remarks were also made by Drs. R. M. Slaughter, of Theological Seminary, Va., W. L. Robinson, of Danville, J. S. Apperson, of Marion, James A. Anderson, of North Danville, etc.

Dr. Green, in closing the discussion, said that the most successful plan of treatment which he had ever tried consisted in irrigations per rectum, with or without bichloride

of mercury solutions or any other antiseptic solutions. The objection urged against irrigations by some of the speakers was based on the apprehension that they might cause perforations at the seats of ulcerations. But this plan of treatment should be used in the first stage of the disease, before ulceration begins; then, in the great majority of cases, the disease would be checked before the ulcerative stage was reached. He had never seen a patient succumb to the disease in which this treatment had been properly used in the earlier stages. Treatment by the mouth should also be combined.

During the afternoon session, the following Officers were elected for the ensuing annual term: *President*, Dr. H. Gray Latham, of Lynchburg; *Vice-Presidents*, Drs. J. R. Gildersleeve, of Tazewell C. H., Hugh Stockdell, of Petersburg, and J. B. Moore, of Ayletts. *Recording Secretary*, Dr. Landon B. Edwards, of Richmond; *Corresponding Secretary*, Dr. J. F. Winn, of Richmond; *Treasurer*, Dr. R. T. Styll, of Hollins, Va. To fill vacancies on the *Medical Examining Board of Virginia*, Drs. Wm. S. Christian, of Urbanna, Middlesex Co., and Kent Black, of Blacksburg. *Subject for General Discussion, session 1892*, Vertigo. *Leader*, Dr. E. T. Brady, of Marion. To deliver *Address to Public and Profession*, 1892, Dr. Jacob Michaux, of Richmond. Luray was selected as the place for the annual session of 1892, and the second week in September as the time. *Honorary Fellow*, Dr. Hunter McGuire, of Richmond, remains as *Chairman of the Executive Committee*. Dr. Wm. D. Turner, of Fergusson's Wharf, Isle of Wight county, is *Chairman of the Committee on Applications for Fellowship*. Dr. Hugh M. Taylor, Richmond, Va., is *Chairman of Committee on Publications*.

Just preceding the elections, *Invited Guest*, Dr. A. M. Phelps, of New York, N. Y., performed two operations for the cure of club feet—both congenital. The one of talipes equino-varus, on a boy about 13 years of age, was of special interest. After the operation, he made some remarks on club feet and the operations required for their relief, etc.

During the night's session, Dr. Benj. Harrison, of Richmond, Va., read the *Report on Advances in Chemistry, Pharmacy, Materia Medica and Therapeutics*—reviewing what is known about tuberculin (still *sub judice*), aristol, retinol, euphorin, albolene, iodantipyrin, iodantifebrin, diuretin, cactina, etc.

Dr. Charles H. Shepard, Brooklyn, N. Y., (*Invited Guest*), read a paper on

The Turkish Bath in the Treatment of Disease.

The essential principle involved in this form of bath is "simply the application of heat in varying temperatures," which quickens circulation and leads to more or less intense perspiration. Manipulation succeeds the bath, causing invigoration, followed by rest and relief. He spoke especially of its value in rheumatism, malarial troubles, etc., and showed how the poisons of such diseases are eliminated from the blood. This artificial application of heat acts as a substitute for climatic influences. It removes congestion and inflammation, equalizing circulation, and imparting activity to the secretory organs. "The Turkish bath is a prime element in preventive medicine," and belongs in the first rank of remedies. The paper excited a good deal of approbatory comment—Drs. T. D. Crothers, of Hartford, Conn., L. G. Pedigo, of Roanoke, Va., E. T. Brady, of Marion, Va., Geo. W. Hubble, of Chilhowie, Va., and others speaking on the subject.

Dr. S. J. Baker, of Bedford City, read a paper on "*Pharmacy and Its Practical Relation to the Profession.*"

On opening the *Thursday Morning's Session*, Dr. L. G. Pedigo, of Roanoke, Va., introduced a resolution, which was adopted, requiring the President to appoint a Special Committee on Programme, "whose duty it shall be to arrange the programme of papers and discussions for the next meeting," with full discretionary powers as to the admission or rejection of any paper upon its merits.

Dr. Richard T. Styll, of Hollins, Va., presented his *Report as Treasurer*, showing total collections during the year, with the balance from last session, to be \$1,343.57; balance on hand, \$186.41, with an outstanding indebtedness of about \$20.

Advances in Obstetrics and Diseases of Women and Children.

The Reporter, Dr. H. M. Nash, of Norfolk, Va., refers to the vexed question of menstruation, and the views of Tait, Sutton, and Johnstone, among others, following the (1) studies of the endometrium by Henle and Leopold. The claims of Johnstone are that the endometrium is a lymph tissue, the adenoid state being the condition always present in the child-bearing uterus. His conclusion is that the necessity for menstruation is brought into zoological history by the erect position, and that its purpose is simply to wash away the ever ripe material, which by force of circumstances has failed to make a placenta. (2) Refers to observations of

Dr. Gardner, Maternite Hospital, Baltimore, disproving a rise of temperature post-partum, in normal labors. Where there is such a rise, some local cause for it can generally be found, but is not caused by secretion of milk. (3) Refers to a discussion as to the frequency of the site of infection in puerperal cases, in which Mundé claimed that the most frequent site of such infection was the fundus; second, the cervix, and last, the perineum. This was opposed by Lusk, who maintained the cervix was the pacific cause of infection; that the fundus was never infected except from below, and then by neglect on the part of the accoucheur. But Ahlfield, in reviewing 2,000 cases at the Marberg Maternite, agreed with Mundé, and claims that in spite of most scrupulous carefulness infection sometimes occurs, and avers his belief in auto-infection, or a predisposition to septic fevers in some cases, which should be combatted by measures to prevent this predisposition. (4) Eichholz is mentioned as authority against uterine irrigation, and in favor of Rheinstadter's mode of preventing uterine septic infection, by dilating the cervix, curetting, and the careful application of chloride of zinc by means of a brush (50 per cent. solution), then cleansing the vagina, and the application of a pad.

(5) Notices Velet's cases of post-partum hæmorrhages, and those occurring in the puerperium, treated by iodoform gauze tampons, the gauze being used in moderate quantities. He is reinforced in his opinion by Dr. H. L. Coe of New York, in a paper recently read before the American Gynecol. Society. (6) Refers to Dr. Geo. T. Harrison's paper on non-puerperal parametritis, who is sustained by some of the most eminent modern authorities, as offered to the disciples of Bernutz.

(7) He also discussed the mode of application of the forceps, whether to the sides of the pelvis, or to the sides of the foetal head. Concludes that strong compressor forceps, like the Hodge, should be applied to the sides of the child's head, the concave edge towards the occiput. Other forceps, as the Simpson, may be applied to the sides of the pelvis, and changed frequently to accommodate changes of the position of the foetal head.

(8) Referred to cephalo-version, as a means of combatting the great mortality attending breech births.

(9) Referred to a paper by Lusk, urging importance of using the most approved methods of resuscitating asphyxiated infants at birth; especially recommended Shiltze's method.

Dr. H. P. C. Wilson, of Baltimore, Md., Fraternal Delegate from the Medico-Chirurgical Faculty of Maryland, read a paper on

Retro-Displacements of the Uterus.

Prior to the issue of the work on "Uterine Surgery," by the great and good Marion Sims, little was actually known of the true pathology, signs, symptoms, or treatment of womb diseases. Every uterine displacement was called "falling of the womb."

For all practical purposes, retro-displacements are retro-flexion, retro-version and retro-lateral flexion—the first being by far the most common. Retro-flexion invariably, sooner or later, causes symptoms of serious disease in some or all the organs of the body. Indeed, many women do not complain of a *local* symptom of the condition, but complain of a bladder, stomach, kidney, liver, heart, lung, throat, or brain disease, etc. If it be a bad case of retro-flexion, even the removal of the cause does not always at once restore comfort. It is a matter of time with judicious constitutional treatment and particular attention to those organs which have suffered most.

The diagnosis of uterine displacement is easily determined by the index finger and the uterine probe. First, clean out the lower bowels, for the patients are generally shockingly constipated. With index finger of the *left* hand per vaginam, the knuckle can press the perineum so far back as to enable the finger to go one or two inches further up into the pelvic cavity. "We cannot accomplish as much with the right hand." The woman should be on her back on a table, with thighs flexed on her abdomen, and legs on her thighs. Then it is usually easy for the finger to determine that the fundus uteri is back in hollow of the sacrum. Sims' left lateral position is best for the use of the probe. With his speculum in position, a tenaculum steadies the cervix, and the probe determines the course of the uterine canal and the amount of fixation. The prognosis depends greatly upon the amount and degree of this fixation. If the retro-displaced uterus be freely movable and of recent duration, we can usually raise it at once into position, and by adjusting a pessary that will be comfortable and, at the same time, retain the body of the uterus in its natural position, the patient will generally go on to improve to perfect health. The two things necessary in the after treatment are (1) wash out the vagina daily with hot water, so as to

keep the pessary cleanly and avoid chafing of the parts, and (2) see that the woman's bowels are freely moved every day, so as to have the pelvic cavity unobstructed. He has almost come to the conclusion that the chief end of man is to serve God and keep his bowels open. How much more important for the woman!

No pessary should be allowed to remain an hour if uncomfortable; but it should not be disturbed, if it gives no inconvenience, until long after it is considered unnecessary; and, when removed, a smaller one should be substituted until the patient can do without any support. Let the uterine ligaments and vaginal walls regain their tone and strength before we trust to them alone.

The pessary should be long enough and sufficiently curved to raise the fundus uteri out of the hollow of the sacrum and carry it forward to its natural position. It should not be so wide as to put the lateral vaginal walls on a stretch. When the amount of irritability and sensitiveness prevent complete restoration, then replace the uterus only partially, and so hold it until the sensitiveness passes off; then proceed a little further, etc.

Very few chronic retro-displacements get well and become able to do without any support in less than from one to three years. If from any cause it is deemed wise to remove the pessary for a few days, examine the vagina with a Sims' speculum, and if found chafed or unduly irritated, touch it a few times with a weak mixture (1:12) of Monsel's solution and glycerin. The pads of lamb's wool should be renewed every day till the pessary is re-inserted.

For retro-displacements, the usual indications are fulfilled by the use of a Hodge's or a Smith's bow pessary. A pessary, if indicated and properly selected and applied, is powerful for good; otherwise it will harm.

Dr. Joseph Taber Johnson, of Washington, D. C. (Invited Guest), remarked that so far as symptomatology, etc., go, Dr. Wilson had read a capital paper. But he was afraid harm might result from the perusal of so valuable a paper if some one did not caution against the use of the pessary in inflammatory conditions in or about the uterus or its appendages. If the retro-displacement be due to a fibroid in the posterior wall of the uterus, then it is obvious that the pessary will not be sufficient. Such a condition, of course, calls for the aid of surgical operation. Remove the cause of the displacement when you can. The probe has enemies and friends—more especially the former. Unques-

tionably, in his opinion, to use the probe, simply to determine the course of the uterine canal, and thus to tell how the womb is bent, will prove harmful in very many cases, unless the gynæcologist is very careful. Pessaries have ulcerated through the vaginal wall by improper fitting and too prolonged a stay. The womb is intended to be a movable organ. Hence to apply a pessary that *fixes* the uterus in a given position, will result in injury.

Dr. L. Lankford, of Norfolk, Va., remarked that in cases of extensive and firm adhesions of the uterus, very little can be done in the way of treatment. Yet, even in some cases that were at the time he took charge of them seemingly extensively and firmly adherent, he has derived good results from the following treatment, applied about once in five days: First, swab out the entire vaginal canal with a solution of bichloride of mercury (about 1 : 4000). He applies a tampon of selected lamb's wool wet with this solution. Generally it requires the use of the tenaculum to steady the cervix of the uterus while introducing the tampon into the uterine canal. He then throws into the vagina and all over the cervix uteri a powder composed of one-third iodoform and two-thirds bismuth subnitrate. In some cases he uses boro-glyceride instead. Then he introduces a pessary made of a ball of "marine lint," which is antiseptic.

Dr. I. S. Stone, of Washington, D. C., commended Dr. Wilson for the special cautions given in his paper as to the use of the probe and pessary in the treatment of uterine displacements, etc. Peri-uterine inflammatory adhesions and various ovarian diseases are the commonest of the causes of chronic retro-displacements of the uterus. It is plain, however, that no pessary can remove such causes. It is undoubtedly true that the applications of pessaries do add material benefit in the way of mental impressions. Some patients feel better after the doctor, in whom they have confidence, does anything looking to their relief. Observation, however, has taught him that when a pessary does not cure a case in a short time, it is best to remove it, and to resort to some other treatment. He referred to a case in which he had recently removed a pessary from a lady which was put in some time before while she was living in Japan. He found three fibromata attached to the uterine walls which had probably been induced by the pessary, or certainly had been made to grow rapidly by the long wearing of the pessary.

Dr. R. M. Slaughter, of Theological Seminary, Va., reported a case of long wearing of pessary, etc

Dr. Wilson, in closing discussion, remarked that his paper bore on cases *not* bound by adhesions, etc. He agrees most fully with Drs. Johnson, Stone, etc., that nothing but harm can come from the use of the pessary if pelvic cellulitis, etc., exist. Such is the *improper* use of the pessary. As to the probe, by no means attempt to raise with it a uterus bound down by adhesions. Raise the womb, under such circumstances, with a Hodge's pessary, and keep the pelvic cavity free of obstructions by such things as faecal accumulations, etc.

Puerperal Eclampsia—Etiology and Treatment.

The author, Dr. J. T. Graham, of Wytheville, Va., showed (*Va. Med. Monthly*, March, 1890), that there is not that close relationship existing between albuminuria and puerperal eclampsia as cause and effect that has been conceded since Dr. John Lever recorded (in 1842) fourteen cases, in ten of which the urine was examined, and found albumen in nine. They are often associated, but albuminuria is not the cause of eclampsia; for cases have occurred in whose urine no albumen was found at any time, and many cases show no albumen until after the convulsions set in. Lusk, however, states that albumen and casts are present in all cases after convulsions, and is strongly inclined to consider uræmia the cause in every case. Parvin comes nearer the truth when he says the cause of eclampsia is not the same in all cases, yet non-elimination in some form is responsible. This non-elimination of excretory products may be due to a faulty action of either the kidneys, the bowels, the skin, or all together. Dr. Graham then considers the pathology under the following heads:

1. *Albuminuria without Eclampsia*.—Of pregnant women the percentage that have albuminuria, varies from four to twenty. But eclampsia only occurs about once in 450 pregnancies. If 4 per cent., or 18, of 450 pregnant women have albuminuria, and only one has puerperal convulsions, there are left seventeen women with albuminuria who have no convulsion.

2. *Eclampsia without Albuminuria*.—In a great many cases Dr. Graham has collected, there are several in which albumen did not appear at all, and many did not show it until after the convulsions had begun. In these cases, the theory of albuminuria as the cause cannot be sustained, for in some, no albumen was present from beginning to end. The convulsions, however, seemed to have either produced

the albuminuria, or the albuminuria and convulsions are both the effects of a common cause.

Dr. Gardner, of Baltimore, reports fifteen cases of puerperal convulsions; the urine was analyzed before convulsions came on. Albumen was found six times, and not found nine times. The number of cases is small; but if they are average cases, we are warranted in the following conclusions:

"1. The presence of albumin in the urine of a pregnant woman is not sufficient cause upon which to base a prediction of probable eclampsia.

"2. The failure to find albumin in the urine of a pregnant woman, is no evidence of the absence, or at least the continuance of the absence of the condition that gives rise to puerperal convulsions

"3. Albumen is so frequently found in considerable quantities in the urine of patients immediately after the appearance of puerperal convulsions, that we are justified in making the statement that the convulsions are the probable cause of the albuminuria."

In the report of Sloane Maternity Hospital (*Amer. Jour. Obstet.*, April, 1891), 1,000 labors are recorded. Four, or 1 in 250 had eclampsia, only one resulting fatally. Three cases had no albumen until after the convulsions appeared. In one urine was examined every week for some time before confinement, and was always free from albumen. After being in labor 14 hours, convulsions began. Her urine showed the presence of albumen. In 1890, Dr. G. collected 66 eclampsia cases; five had eclampsia without albuminuria before the attack, and two of these had no albumen in their urine at anytime before, during or after the convulsions. From replies to circulars sent to practitioners in Virginia, Dr. G. collected 27 cases of puerperal eclampsia. Albumen was found in 13; no albumen in 1, and in 13 the urine was not examined. Seven resulted fatally, and 20 recovered. Adding these cases to others collected we have 182, considerably over 100 being primiparæ. In a great many no examination was made, but of those cases whose urine was examined, 16 contained no albumen.

3. *The Condition of the Kidneys During Pregnancy* —Here the theory of mechanical obstruction to the flow of urine by the pressure of the gravid uterus upon the kidneys and their blood vessels is quoted as laid down by Dr. Kucher, of New York. It is claimed that this obstruction inflames

the kidneys, and thus prevents them from excreting the poisonous elements of metabolism.

4. *Absorbed Soluble Products of Intestinal Putrefactions.*—Constipation produces severe headache, vertigo, and great mental inactivity; those who suffer with it have insomnia, or sleep is unrefreshing. In habitual constipation there is at times temporary loss of consciousness, and often the person is hypochondriacal. These symptoms are produced by poisons that result from the putrefactions going on in the intestines; when there is constipation the fæces remain in the bowels long enough for the soluble products of these putrefactions to be absorbed. If these products are so poisonous in constipation as to produce languor, headache, etc., they must be a power for evil in pregnancy, where constipation so often exists. When fæces are thus retarded, absorption of the soluble products of intestinal putrefactions takes place. These products enter the circulation and cannot be eliminated by the kidneys, as in temporary constipation. Here, then, we have *the source of active poisons to the system, intestinal putrefactions*, and an additional avenue of exit locked up in the inflamed kidney.

Prophylactic treatment must be directed towards maintaining a healthy action of the skin, bowels, and kidneys. Every pregnant woman should be under the care of a physician. Urinary examinations should be frequent, and constipation carefully avoided. When labor begins, the bowels and bladder should be emptied; and long and tedious labors should be terminated by the use of forceps before the patient's strength is exhausted. If convulsions come on before delivery, the contents of the uterus must be removed as soon as possible; also a loaded rectum and a distended bladder must be relieved before the spasms can be controlled. As to sedatives, give choral hydrate by itself, or combined with bromide of potash, sulphate of morphine, chloroform, and veratrum viride. The *eliminative treatment* may be subdivided into (1) diuretics, (2) diaphoretics, (3) hydragogue cathartics, and (4) venesection.

Dr. William C. Dabney, of the University of Virginia, read a paper on

Symptomatology and Treatment of the Chronic Forms of Nephritis.

He took up the symptoms in the following order, reviewing each as to its form and pathological indications: Cutaneous, urinary, digestive, nervous, ocular, cardiac and circulatory, and respiratory. The object of his

paper was not to consider the complications of Bright's disease, nor the symptoms to which those complications give rise; but to call attention to the variety of the symptoms indicative of renal mischief and to the frequency with which dropsy is met in such cases, and to the importance of an examination of the urine in all cases where such symptoms are present, even though they are apparently due to some other cause. He has saved himself from many a mistake in diagnosis by the use of the Parke, Davis & Co.'s pocket urinary test case, which he carries in his pocket as constantly as he does his thermometer and hypodermic case.

As to the treatment of cases of chronic forms of nephritis, in all cases, except when such symptoms as those of convulsions, coma, etc., threaten, use a *purely milk diet*. Meat in any form is injurious. Avoid cold and dampness. Digitalis is useful when the flow of urine is scant and the pulse weak and compressible, but it is injurious if given alone when the urinary flow is profuse. Strophanthus, like digitalis, increases the force of the heart beats, but causes less contraction of the blood vessels. Nitro-glycerin is useful in all cases where vascular tension is high. Occasionally nitrite of amyl is very serviceable when violent præcordial pain, due to loss of balance between the heart power and the vascular tension, sets in. Digitalis and nitro-glycerin in combination are useful when the heart is commencing to flag and the arteries are still contracted.

Invited Guest, Dr. B. A. Watson, of Jersey City, N. J., read a paper of great value on a pathological condition not heretofore described, entitled

Concussion of the Lungs.

He uses the term "concussion" in precisely the same sense as it is used when the brain is the seat of concussion lesions—allowance being made merely for differences in the weight and texture of the organs involved. Study of 141 experiments made by the writer warrants him in asserting that concussion of the lungs may exist either as a complication of the vibratory action arising from the application of concussive force powerful enough to cause marked effect even on the brain, or the concussive force may be entirely expended on the respiratory organs. The only important cases of concussion of the lungs and other visceral organs are always followed by pathological lesions, readily perceived by the unaided eye post mortem; yet in a considera-

ble number of these cases, the most careful physical examination may fail to reveal their existence. Dr. Watson proceeded to consider his subject under the three subdivisions: (1) An organic disturbance attended with slight pathological lesions, not characterized by any consecutive complications; (2) A severe organic disturbance, attended with severe pathological lesions, characterized by physical and rational symptoms, and commonly followed by consecutive complications which are generally inflammatory; (3) A grave organic disturbance, attended with grave pathological lesions, frequently producing death within a few minutes or a few hours. Indirect concussive force is much more productive of serious lesions in the thoracic, abdominal and pelvic organs than it is to the brain or spinal cord.

A Successful Myomectomy for Parasitic Tumor

Was the title of a report by Dr. I. S. Stone, of Washington, D. C. An unmarried lady, aged 35, previously healthy. A tumor, non-painful, began to form in her abdomen some six months before she came to the Doctor. Its presence still caused but little inconvenience, although she had the appearance of one about eight months pregnant, and was emaciating and had albuminuria. Abdominal section was made; the tumor was attached to the posterior surface of the uterus only by a long slender adhesion, indicating the point whence the myoma was forced from its bed through uterine muscular contraction. Its diminished nutrition having been interfered with at the time of its expulsion, a new base or pedicle was formed on the posterior surface of the right broad ligament, having a broad base. Its blood supply was taken from the broad ligament. The uterine tubes and ovaries were quite normal in appearance, and were not disturbed in the operation. The pedicle was treated after the "Schroeder method;" and, as it was very short, was left within the abdominal cavity. The tumor weighed fifteen pounds, was of peculiar formation, contained much fluid, and was thought to have been an ovarian tumor. The drainage-tube did excellent service in this case, discharging abundant rusty-colored serum for many days after the operation. The patient made an excellent recovery, and is now well. The tumor closely resembled the variety known as "*fibroma molluscum cysticum abdominale*."

Dr. Charles M. Shields, of Richmond, Va., read a paper on

Treatment of Goitre by Electrolysis.

He resorted to the labile method, or application of the electrodes to the surface of the skin, over the tumor. He reported four cases of the fibro-cystic variety—selecting these for report because each of them had been previously treated by absorbents, blisters, injections, or setons, without benefit. The electrolytic needle was not used in any of the four cases. The current, from 15 to 30 Leclanche cells, was employed, using as many cells as the patient could bear without stinging or blistering the skin. The applications were made at intervals of from two to six days, and continued from six weeks to as many months; the sittings lasted from ten to thirty minutes—the negative electrode being moved from place to place when burning was complained of. Three of the cases were of the fibro-cystic variety, while one was of the simple glandular. In one case, the growth was reduced to one-fourth its original size; while in three it was cured. The goitres in two cases had existed five and seven years respectively, and were very firm. The reporter favored the electrolytic method of treatment, as it was not dangerous, caused no pain, and produced better results than other plans he had tried, other than excision. However, in the purely fibrous variety of goitre, of long standing, he did not expect much good to result from electrolysis; but in the fibro-cystic variety—the form which is most commonly met with in practice in this section—he considers electrolysis the most efficient means of treatment at our command.

Dr. W. H. Baker, of Lynchburg, read a paper entitled *A Glimpse of Ancient Egyptian Ophthalmology*. The Egyptian doctors, in spite of their great medical knowledge, seem to have used charms and incantations in the treatment of the sick. Directions are given in the hieratic papyri at Berlin for this style of high art in the treatment of certain diseases. In 1872-3, Ebers secured one of the largest and best of ancient Egyptian hieroglyphic manuscripts bearing on ophthalmology, with a lexicon. It was written in the sixteenth century before Christ. Iridectomy was skillfully performed. Cataracts were cured—most probably by the old couching method. Keratitis, ophthalmias, etc., were all as successfully treated as now.

Dr. Joseph A. White, of Richmond, Va., presented two papers—one on *Mistaken Impressions About So-Called Nasal Catarrh*, which he read; and one on *Some Suggestions About*

Cataract Operations, which he requested to be referred to the Publishing Committee without reading.

Mistaken Impressions About Nasal Catarrh

Was the title of a paper by Dr. Joseph A. White, of Richmond, Va. He was very emphatic in his denunciation of quacks and quackery, and of the influence of their assertions upon the credulous patient. It is a common error among practitioners to affirm that nasal catarrh is incurable. The term itself is used to cover a multiplicity of nasal and post-nasal troubles. One patient has a discharge from one or both nostrils; another is unable to breathe freely through the nostrils; another has recurrent attacks of hoarseness; another a disagreeable odor of the breath, etc. Nasal catarrh really means only some abnormality or disease of the nasal chamber; thus the term can be applied to any number of troubles of the nose, and of the upper part of the throat. Even with the broad interpretation of the term just given, no class of diseases is more amenable to treatment; at least 90 per cent can be cured. The post-nasal space can be easily examined by using Dr. White's "Palate Retractor." Nearly all discharges from the nose, or upper throat, depend upon the presence of some enlargement or deformity of the tissue in the nasal spaces; and the cure depends on the restoration of the spaces to their normal condition. Adenoid tissue is among the commonest of causes of nasal catarrh. We nearly always find adenoids in children with the snuffles and obstructed nasal respiration. Their removal cures the nasal affections, and the deafness, also, when present. Sprays, salves, washes, etc., are of no avail until this tissue is taken away. Children are never too young, and adults never too old, to have adenoid tissue. In short, all forms of nasal obstructions should be removed, especially if the alterations affect the septum. When not practicable to secure proper surgical aid at once, antisepsis should be used until this can be done. A simple wash used by Dr. White consists of lukewarm water, bicarbonate of soda, and listerine, applied with a nasal syringe. The nasal passages should be washed until no discharge comes away. A weak solution of bichloride of mercury, 1: 4,000 or 5,000, or peroxide of hydrogen, or "Blair's chloral thymol," may be substituted for listerine and soda, in cases suitable for them. In some cases after the cleansing, an application of eucalyptol in vaseline, or a powder of aristol and subnitrate of bismuth, can be used, according to the condition of the

parts. The length of time necessary to continue treatment, so that the patient can carry it on for himself, depends upon the amount of surgical work to be performed, and the ability of the patient to submit to it. No one case is a guide for another.

Invited Guest, Dr. Wharton Sinkler, of Philadelphia, Pa., read a paper on

Hereditary Chorea, with Report of Three Additional Cases, and Details of an Autopsy in a Case.

Dunghlison described the disease in 1841, although it is generally known as Huntington's chorea, by whom it was not described till 1872. In 1889, Dr. Sinkler reported two cases, with family histories for three or four generations. He now adds three cases:

Case I.—Male; age 63; has had choreic movements since he was 48. His mother had the same disease. For a short time, he could control his movements. His mind is somewhat affected, but delusions are uncertain.

Case II.—Woman; age 46; when 42, choreic movements began in upper extremities, which rapidly extended to the lower extremities. Her mind is impaired. No antecedent choreic history obtainable. Arm movements are constant and extreme. Gait is characteristic of the affection. Her reflexes are much exaggerated, and there was slight lateral nystagmus.

Case III.—Male; age 48. Father and grandfather choreic. When 29, his arms and hands became stiff, and soon afterwards became choreic, so that he has not been able to work since he was 30. His arms, hand, and trunk, are in constant motion—excitement increasing them markedly. The peculiar measured dancing step is strikingly exhibited when walking. Mental disturbance existed—melancholic, and is morbid, but apparently not delusional. Died when 49. No autopsy.

Huber found pachymeningitis in one of his autopsies. Osler, in an autopsy, found no lesion in the brain or cord. In an autopsy by Dr. Sinkler (case reported 1889), he found no gross lesions in the brain or cord. The brain was not microscopically examined. Dr. Gray, of Washington, D. C., found some microscopical changes in the cord involving the region about the central canal and in the antero lateral columns. Dr. Sinkler believes the pathology of hereditary chorea consists in a change in the motor tracts, dependent on the instability in the nervous system due to a hereditary tendency, and that it is developmental. He concludes that

—(1) Hereditary chorea, while much resembling it, is a different affection from Sydenham's chorea. (2) Chorea in the adult insane is a different affection from hereditary chorea, with insanity. (3) According to present evidence, the pathology of the disease begins as a degeneration of imperfectly developed cells in the motor tract of the brain and cord. (4) The occurrence of the disease at an early age in children of some of the cases recorded is confirmatory of this view. He believes that there are two varieties of the disease—one in which the irregular muscular movements begin first, and, after a lapse of years, deterioration begins; the other, in which the mental disease begins before or simultaneously with the chorea.

Invited Guest, Dr. T. D. Crothers, of Hartford, Conn., read a paper on

The Drink Problem from a Medical Point of View.

It is apparent that the use of alcohol and narcotic drugs is to-day followed by more profound degeneration and by greater fatality than in by-gone years. Persons capable of using these drugs in moderation are growing fewer in number, and will soon be unknown; while the number of drinkers who become insane, beget idiots, and become paupers and criminals, is rapidly increasing. Such drinking fixes the hereditary *disease of inebriety*. This is established by indubitable statistics. Prohibition will, in many cases, only change the form of disease. Periodicity in the drink disease is a remarkable but a common feature. Like the periodicity in intermittent fever, it is clearly a neurotic disease.

A third outline truth in evidence of disease is the uniformity in the progress of the cases. In 100 cases of moderate drinkers, as found in clubs and fashionable society, a certain estimate can be made that so many will die directly or indirectly from alcoholic excesses in five years. Delirium tremens, alcoholic delirium, mania, melancholic suicide, rheumatism, gout, Bright's disease, and heart-failure, occur with absolute certainty in a certain per cent. Go on five years more, and the mortality and condition of those living can be predicted with absolute certainty. Recently compiled statistics indicate the curious fact that there are periodic waves of epidemic forces that develop tides of drunkenness and then fade away. Some statistics seem to point to a period of about every sixteen years when inebriety reaches a maximum and then declines to a minimum. The remedy

is back of the saloon. Make heredity a vital question of physical and moral law; make it a sanitary question in the highest sense, and treat everything as dangerous and criminal which perils individual health and life or destroys happiness. The general principles of curability of the disease of inebriety by scientific measures refer to considering drunkards and drinkers as dangerous to others, and isolating them as the subjects of contagious disease. Those who use alcohol to excess should be confined in hospitals until restored. Make them pay for their care by the cities or State by giving them employment. Tax the manufacturer and seller of spirits to build such hospitals—and support them, if they cannot be self-sustaining.

Dr. E. T. Brady, of Marion, said that he is not a firm believer in the heredity of drunkenness. He has statistical records of over 800 drunkards. These have over 1,800 male children past the age of thirty-five years. Of these children a little less than 100 are inebriates, and over 1,700 are not. These numbers are sufficiently large to carry weight. He has been waiting for his numbers to reach 1,000 before publishing them, but he would like to ask Dr. Crother's opinion of them as they are.

Dr. Crother, in reply, stated that if the ancestry of the drinking posterity were investigated more fully his position might, he thought, be strengthened. He also expressed a belief that a number of the non-drinking men were neurotic.

Dr. Brady said he is not yet convinced. It is plainly apparent that to carry his statistics further back would strengthen his position instead of Dr. Crother's. For it would only show that the 1,700 non-drinkers have *exactly the same ancestry* as the 100 drinkers. There are, as the Doctor suggested, a few amongst the non-drinkers who have neurotic tendencies, but their proportion is quite small. It is of interest in this connection to state that in the compilation of such statistics usually, there will be found cases in which the father of a drunkard was not a drunkard until after his son's birth, yet he is crammed into the record and cited in illustration of the descent of the habit from one generation to another. This is not the case with his tables. He does not wish to be misunderstood as saying that there are no cases of hereditary transmission of the drinking habit, but only that such cases are *rare*. What he more particularly wishes to impress is the one-sidedness of statistics as generally collected. They are generally collected to show a certain point, and they always show it. Science de-

mands a broader view, and statistics should be collected and analyzed without prejudice, and whether they prove or disprove one's own conclusions, they should be given to the profession *in toto*. He protests against the injustice of such remarks as, when we see a drunken man whose father was a drunkard, many will exclaim, "Poor fellow, he is not to blame; his father was a drunkard." Would it not be equally just to look at this same man's four or five brothers, all of whom are sober, able and industrious, and say, poor fellows, they deserve no credit for their good qualities, for they inherited them from their father, who was a drunkard?

Dr. C. W. Gleaves, of Wytheville, Va., said that if the inebriate is an hereditary victim, he cannot understand why the hereditary disease should so peculiarly affect the male and not the female members of a family, as is the case in his observation.

Dr. I. S. Stone, of Washington, D. C., commended the authors of the two papers just read for their able treatment of a difficult subject. He thought nearly all competent persons believed in the existence of inebriety as a disease to be treated as are others—by appropriate restraint, environment, medication, etc. But he was convinced of the necessity for practical application of our views, and urged the Society to take the initiative and ask the legislature to erect and maintain an asylum for inebriates. When this subject came up for discussion in that body there could be abundant evidence adduced to show the necessity for such an institution.

Dr. J. T. Graham, of Wytheville, Va., read a paper on

What is to be Done with Criminal Lunatics?

He advised that a murderer adjudged insane be kept confined for a period of twelve years. If he shows signs of lunacy during the last five years of his commitment, retain him five years longer, during which period he is to show no sign of lunacy. If not cured in twelve years, then, of course, commit him as any other lunatic. But if he is not insane, then twelve years' confinement will not be considered too long a time to confine him as punishment for a capital offense.

Dr. E. T. Brady, of Marion, Va., said that the paper just read is one which should interest every member of this Society. He will not let this opportunity pass without calling attention to some of our laws regulating the decision as to the sanity or insanity of persons accused of mental

derangement. It is not generally known that all that is necessary in order to commit a person to an asylum is to have the testimony of one physician, whether of good standing or otherwise, and the endorsement of three magistrates. These magistrates are supposed to have seen the person, but it frequently happens that their decision is given solely on the testimony of relatives or prejudiced neighbors. And even when they do see the person, the vast majority of so-called magistrates are in no sense capable of deciding such a question. One magistrate signed a committal of a patient to the Southwestern Asylum, and wrote a letter saying that he did not believe the man insane, but signed the mittimus to accommodate the other two. Several patients have been sent to our asylum in the delirious stage of typhoid fever, and not insane at all. The real facts are that one can have any man in the State arrested and committed to an asylum. The criminal insane are a dangerous class and should be kept separate from those who are non-criminal. Justice demands that innocent and helpless patients should be protected from the dangers, physical and moral, of association with the criminal insane, and public sentiment, as well as the public safety, demands that insane with criminal tendencies shall be restrained by law for a longer period than their mere restoration to sanity. A great need in this State is a State Board of Lunacy, whose duty it should be to decide as to the fitness of cases for asylum treatment, and also to look after the insane, in and out of asylums, and to make reports to the legislature upon the needs and methods of the State hospitals.

The men composing such a board should be competent, and should receive just compensation.

In reply to Dr. Blackford, he said that his objection to the establishment of a State Board of Lunacy must be based upon some misunderstanding of the duties of such a board, as they in no way interfere with the management by the boards of directors. They only act upon the applications and discharges, investigating such cases as the superintendents of asylums shall call attention to, and also investigating into complaints of abuses. In this way there is no "system of espionage" in the disagreeable sense of the term, but only a competent board of inquiry in cases requiring investigation. Such a board would give justice to the individual, justice to the public, and justice to the asylum superintendent. It would also make to the legislature a clear and unbiased statement as to the needs of the

State in regard to legislation and appropriation. Such a board would not constitute, as Dr. Blackford has stated, a "system of espionage," and *if it did*, he was confident from his knowledge of the manner in which the asylums of the State are conducted, that all of the asylums are free from any desire to hide their methods and results. As for the Southwestern Asylum at Marion, of which Dr. Preston is the able superintendent, we not only do not fear the closest scrutiny into our asylum affairs, but also that we *court* such scrutiny, believing that in such scrutiny lies the most justice and the greatest benefit to every one concerned.

Observations on the Etiology and Pathology of the Diseases of the Puerperium.

Invited Guest, Dr. T. A. Ashby, of Baltimore, read a paper on this topic. The paper was based on a personal study and observation of the diseases of the puerperium, and was illustrated with specimens of diseased tubes and ovaries, which the author had removed from patients who had experienced the diseases in question. It has long been known that the pelvic region was involved in the most destructive inflammation following abortions and labor at full term, but it was not until the surgeon's knife boldly invaded the intra-pelvic region that the professional mind began to appreciate the etiological and pathological significance of intra-pelvic disease. An ante-mortem investigation of this region threw more light upon its pathology than all the post-mortems of previous centuries. Pathological study on the living, as distinguished from the dead subject, has never failed to present the strongest incentive to clinical work.

With this study in pathology, came a clearer view of its etiology, and out of the two has been established a noble line of work in prophylaxis and treatment.

Through the aid of the surgeon's knife, the intra-pelvic conditions following the puerperium could not only be arrested when in most active force, but when they had reached their more passive forms.

The speaker next undertook to show that the profession has in the past greatly underestimated the relation which the puerperium sustained to intra-pelvic diseases.

It was not necessary to refer to the various epidemics of puerperal fever which had raged with such violence in European countries during the past century, to preach a discourse upon the pathology of the puerperium. Such in-

fluences as were then in force do not now exist. It is another form of the puerperal diseases that now chiefly interests the abdominal surgeon. The diseases of the puerperium can be shown to be largely inflammatory and septic. Traumatism plays a conspicuous part, since it leaves wounded tissues as an open doorway to septic infection. In the author's experience, he had never failed to find a lacerated cervix in every case of puerperal metritis, peritonitis, or of septicæmia which had come under his observation. He could further say he had not seen a single case of tubal disease in a woman who has borne children in which he did not find an old cervical tear, or other evidence of a former traumatism. The association of such lesions with intra-pelvic conditions requiring abdominal section for the removal of inflammatory products has been so constant that he was prepared to believe that the lesions bore a direct etiological relation to the intra-pelvic disease. Nothing seemed clearer than the relation of cause and effect. A woman gives birth to a child either prematurely or at full term. Traumatism, either mild or severe, may come and invite a reparative process. Let dirt, diseased micro-organism, or the debris of an unclean labor get access to these lesions, and the conditions underlying all wound infections are at once set in operation.

It is problematical as to what will be the outcome of the forces thus set in motion. In one case, septic endometritis, followed by salpingitis and pelvic peritonitis may be the outcome; in another, a septic infection, pure and simple, with minor local lesions. The result must be largely traced to the pathogenic agent.

Nothing is clearer than that the micro organisms which invade the female vagina differ most markedly in their morphological characteristics, as well as in the clinical conditions, symptoms and lesions which they establish.

Attempts to classify these germs have been made by different observers, and we may now recognize two distinct characteristics—the germ of putrefaction and the germ of suppuration. These differences correspond with the clinical histories so often found during the puerperium. In one case a distinct sapræmia; in another a true septicæmia or pyæmia. In puerperal sapræmia, it is assumed that the bacteria germs are the agents which generate the ptomaines or leucomaines which gain entrance to the blood. This germ is incapable of living in the blood, and only feeds on the debris of a careless labor. Remove or disinfect the de-

composing mass, and the poison is at once destroyed. On the other hand, micro-cocci, chain-bacteria, or strepto-cocci of wound infection—all supposed to be identical—flourish in the blood, and multiply with such rapidity as to produce the most profound toxæmia.

From a surgical standpoint, the gynæcologist deals largely with the results of intra-pelvic inflammations. He is brought in contact with the lesions within the female pelvis after the damage has been done. But this experience teaches him to look to the true etiological influence, and to recognize the importance of prophylactic measures in time to prevent such lesions. He recognizes that the diseases of the puerperium are largely preventable, and that the child-bearing woman should not be exposed to conditions which are sure to establish severe and often fatal forms of intra-pelvic disease.

The prevention is largely in the hands of the general practitioner and obstetrician. An aseptic midwifery practice will prevent all of the conditions which have been described by the author, and which have been illustrated by the pathological specimens which he exhibited to the Society.

Dr. William F. Drewry, of Petersburg, Va., presented a paper, the title of which was

Advances in Neurology and Psychology.

He first reviewed, in a general manner, the progress made in the study of disorders of the nervous system, during the last decade; then the relationship between these branches of medicine, and the several other branches, —surgery, gynæcology, ophthalmology, etc. Operative interference in the treatment of neuroses and psychoses had frequently led to good, but sometimes to bad results; consequently the greatest precaution should be exercised in the selection of cases for operation, both on the cerebro-spinal system, and the female generative organs. He attributed much of the chronic incurable disease of the nervous system, to a failure on the part of the general practitioner to recognize, and properly treat such in the earliest and most curable stages; hence urged that all the medical schools embrace in their curriculum a course in neurology and psychiatry. Asthma had been placed in the catalogue of spasmodic neuroses, and the best treatment consisted of atropine and strychnine, hypodermically, and, according to Hoffman, nitroglycerin given in the same manner. The

theory generally adopted to-day, regarded angina pectoris as a neuralgia of the cardiac plexus, sometimes idiopathic and sometimes symptomatic of lesions of the heart, and of the great vessels. In the treatment, nitroglycerin hypodermically, nitrite of amyl, arsenic, but particularly electricity, had proven useful.

There were now two views regarding the nature of sciatica—one that the disease is a neuritis, the other that it is a neuralgia. The modern treatment of sciatica, resolves itself into three cardinal principles: Relief of pain, antagonism of inflammation, and rest of the affected part. Neuralgia had been relieved by croton-chloral, nitro-glycerin, Duquesnal's crystallized aconitine, as recommended by Seguin, etc. Phenacetin he regarded as a most reliable remedy in neuralgias. Cocaine, hypodermically, at the seat of pain, and then application of a strong current of faradic electricity, placing one pole at the foramen of exit, and the other on the course of the nerve, half inch distant, had proven efficacious. Graves' disease had been found frequently associated with epilepsy, hysteria, diabetes, and insanity. Tabes, according to Berger, originates in some change in a centre in the medulla, regulating the vaso-motor condition of the optic nerve and of the spinal cord. The pains in locomotor ataxia and other spinal diseases had been relieved by a firm pressure bandage, etc. The view that inebriety is a nervous disease, was gaining ground with scientists. In certain stages, it should be treated as a disease of the nervous system, which could best be done in a well regulated retreat, etc.

Strychnia had been claimed to be very efficacious in curing habitual drunkenness. The virile, the anal, the oral, and the aural reflexes were comparatively new discoveries and must become of important clinical and physiological significance in certain neuro-pathic conditions of the cord and the sympathetic system. Suspension as a therapeutic measure in diseases of the spinal cord, had proven comparatively successful in the hands of many, while others report that it was of little or no utility; hence a further trial and more careful investigation were necessary in order to say in what classes of cases it will be most useful. From statistics gathered from various authors, it would seem that rheumatism cannot be made responsible for many cases of chorea. In the therapeutic treatment of this disease, arsenic given to the point of toleration, and anti-spasmodic agents were to be mostly relied upon. Several new cases of alcoholic

paralysis had been reported. As to epilepsy, no causative lesions had been observed with constancy that were not found in other diseases. The bromides still hold the first place in the therapeutics of epilepsy. Other remedies which had been more or less efficacious were borax, bromide of robidium, simulo, chloral, amyline, hydrate, antifebrine, atropia, sulphonal, trinitrin, hyoscine, etc. The treatment should be a combined one—nutritive, antispasmodic, and sedative. The author mentioned advances that had been made in the study of various other neuroses.

In the treatment of insanity, the author, who has had several year's experience in dealing with this class of diseases, advised against the too free use of hypnotics. He advises systematic employment, gymnastics, etc., the least restraint, and the greatest freedom consistent with safety. Several cases of "post-neuralgic insanity" and "post-operative insanity," had been reported lately. The present state of our knowledge of general paresis was reviewed. From a careful compilation from the various asylum reports for 1890, the author found that three (3) per cent. of admissions for the year were paretics. The chief causes, he thinks, were alcohol, syphilis, and venereal excesses. He claims that insanity was increasing. In regard to the negro, he produced valuable statistics to show that the disease had increased in the last ten years at the rate of over a hundred per cent. as compared with the number of cases then. The cause of insanity in the negro was mainly physical in its nature.

Analyses. Selections, etc.

Treatment and Needs of the Insane of Virginia.

The Fourth Annual Report of the Superintendent of the Southwestern (Virginia) Lunatic Asylum, at Marion (Dr. Robert J. Preston), is so full of points of professional interest that we present much of it in advance of its publication for the session of the Virginia Legislature, to assemble next month.

The total number of admissions in this asylum since its opening has been 766; discharges, 426; deaths, 76; remaining September 30, 1891, 264. During the same period (1887 to 1891 inclusive) there have been in all three Virginia State Asylums *for whites* (Eastern, at Williamsburg;

Western, at Staunton, and Southwestern, at Marion), 1,593 admissions; 920 discharges; 408 deaths. There are now about 205 applicants for admission to asylums unprovided for in the State.

There is a constantly increasing ratio in the number of the insane over and above the number annually provided for by the utmost exertions of all the asylum authorities. This state of things is productive of great and irreparable harm to this afflicted and helpless class. Virginia has been derelict in this responsible duty of providing for these her afflicted children. This is a call of humanity, and should excite the sympathy and earnest pity of every citizen, "and would do so could the strong appeals reach their ears as they do ours."

The urgent demand for admission continues unabated, and we are often much perplexed to decide as to the cases of admission. They cannot come in rotation, for often the very cases most likely to be benefitted thereby, are the very ones that we cannot admit for want of single rooms required for their safe custody and treatment.

Many patients who are harmless and quiet, but not entirely restored, are often sent out on furlough in charge of their friends. The great majority of these cases are greatly benefitted by this change—their improvement becoming more rapid—and usually after a month or a few months' furlough, they are discharged as restored. Out of 65 furloughs during the year, only twelve have been returned to the asylum. Some few patients discharged as restored, on returning to their homes, often to unfavorable surroundings, and perhaps to ill-treatment, soon relapse into their former trouble. Some act of violence may be committed, and asylum authorities are more or less blamed for sending them out too soon. The community generally cannot realize that insanity (or disease of the brain), like other diseases (as of the lungs, kidneys, etc.), may, in many cases, be cured, but similar causes may reproduce the trouble and bring on another attack.

Insanity is a disease of the brain, and like diseases of other organs, is subject to much the same laws as to cause and effect, and responds in a great measure to much the same treatment (therapeutical, moral, and hygienic), looking to the restoration of the normal, organic function in each. Different remedies are called for in disease of the lungs, kidneys, liver, etc. So it is in disease of the brain. As the brain function relates in a paramount degree to mental

manifestations, so the treatment must consist in a paramount degree in those moral, therapeutic, and hygienic measures which can be carried out most successfully *only in asylum wards*, and which have of late years, given such marked results in this class of diseases.

This advance will be still more marked when the public generally are brought to recognize these facts, and to look upon insanity just as they do upon other diseases. An eminent alienist (Dr. Tobey) says, "Wholesome food for reflection is as essential to mental health as wholesome food for digestion is to physical health. Often it is * * * quite as important or more so, to administer through the mind to the body as through the body to the mind."

The celebrated Dr. Allburt expresses an entire lack of faith that much was to be expected from "bottle medicine" alone in the treatment of insanity. He says, "The personal qualities of every member of the medical and nursing staff is *really the cure*. * * * * The Superintendent is your medicine, the staff is your medicine, the nurses are your medicine, your conservatory and your entertainments, your birds, your flowers, your gardens, and your farm are your medicines."

Dr. Connally, "the great disciple of reform and non-restraint," says, "*Everything done in an asylum is remedial or hurtful*."

Dr. Archibald, another eminent alienist, says, "I have learned, and am fully persuaded of its correctness, that the common comforts and extra features calculated to please, together with plenty of exercise, moderate and suitable employment, good food, and reasonable amount of freedom, formed the foundation for recovery or great improvement in ninety-nine cases out of one hundred."

Medicines are in some cases powerful for good. Most patients coming to the asylum in an anæmic condition, require tonic and restorative remedies; yet in the great majority of cases, "occupation, amusement, and every mental diversion possible" are the sheet anchors of treatment. While hypnotics and sedatives are at times necessary and productive of good, yet in the main we endeavor to steer clear, as far as possible, of chemical or therapeutical as well as mechanical restraints.

The usual hypnotics—chloral, hyoscine, paraldehyde, sulfonal, antikamnia, etc.—are, at times, used with advantage. In epileptic cases the bromides are the most effective remedies in moderating the seizures; but unfortunately, no re-

liable, curative measures seem attainable in the great majority of cases. Antifebrin in eight grain doses three times a day as recommended by Hare, has proved beneficial in some cases in controlling epileptic seizures, but after a short time it seems to lose effect. It is of value here in that it enables us to suspend for a time the bromide treatment.

Statistics of this Asylum, showing the great importance and true economy of the early treatment of the insane. These statistics are computed from the beginning up to the present time, and gives the duration of insanity before admission, and the result of treatment.

<i>Duration of Insanity.</i>	<i>Admissions.</i>	<i>Discharges.</i>	<i>Per Cent.</i>
Less than 6 months.....	217	196	90 $\frac{3}{4}$
6 to 12 months.....	117	86	73 $\frac{1}{2}$
12 to 18 months.....	82	55	67
18 months to 2 years.....	158	54	34 $\frac{1}{10}$
2 to 5 years.....	81	27	29 $\frac{6}{10}$
5 to 10 years	59	7	12
10 to 20 years	42	4	9 $\frac{1}{2}$
Over 20 years	10	0	0
	<hr/> 766	<hr/> 426	<hr/> 54

The statistics of insanity throughout the world fully corroborate these results. Every insane person represents a loss to the State (estimating average maintenance and average earnings) of at least \$300 per annum.

Among other recommendations, Dr. Preston urges the Legislature to change of name from Lunatic Asylums to State Hospitals. This change is being effected in New York and other States.

Undertaking as a Nuisance.

There is in New York city, in one of the most fashionable localities, an undertakers' and embalming establishment which the neighbors have appealed to the courts to have declared a nuisance and be abated. The main grounds of objection were the fact that the property had been restricted against any "offensive" business, and it was alleged that embalming was offensive in a legal and actual sense. It was not denied that the defendant's business was an absolutely necessary one to the community, but that it could not be carried on in view of the restrictions in the deed. The case was further complicated by the fact that there was

a chapel attached to the establishment, where funeral services could be held when desired, and it was claimed that this made the whole establishment partake of the character of a church, and possess its rights.

The decision of the court was, however, to the effect that the business was "offensive," and must be stopped.

The opinion stated that: "Any family of ordinary sensitiveness would at once pronounce the combination of purposes to which the defendant's establishment is put as shocking to the finer feelings, irritating, causing unpleasant sensations, and destroying the happiness of life and the comforts of home."

The proprietors are not, it is said, satisfied with this summary closing up of their business, and will appeal the case.

Stone in the Bladder.

Dr. J. J. Maxfield says (in *The Prescription*) that a year ago Mr. A., 51 years old, consulted me for an old standing and intractable cystitis, as he supposed and had been informed by two physicians. I suggested an exploration and readily detected a stone. It was a large one, and it was so hard that you could hear the click of the instrument in any part of my office. I advised that he should have an operation performed, but as his brother had died after the same operation a few years previously, he was afraid, and refused to consent. With a view to palliate, I ordered him to drink one quart of Buffalo Lithia Water every day and also to wash out the bladder once a day with the same, made a little warm. Careful attention to diet and bowels, with gentle tonics, was also directed. This treatment was faithfully kept up for nine months, when pus appeared in the urine, and the operation could no longer be delayed. During the time he was under treatment, large quantities of debris came away, some of the pieces were so large that it was only by great effort that they were passed through the urethra. None of these pieces, however, were saved. The day before the operation, on the 20th day of June, I examined him again, and the stone did not seem so large nor was the click so pronounced, though we could tell that there was a stone present by the grating as from a rough body. On the 21st, I did the left lateral operation, and after getting into the bladder, I introduced the forceps, grasped the stone, and pulling it away, I found it was like a mass of putty filled with sand. It was sacculated, and

there was a quantity of pus in the viscus. With forceps, gauge, curette, and fingers I finally got it all away. No part of it was so hard but that it could be crushed with very little effort between the fingers. After the fragments were allowed to dry they became hard.

The cut will illustrate better than I could tell how some of the mass looked, though a great deal of the finest particles were lost in the irrigation.



It will be noticed that there were very few large pieces, and these were so soft that they would drop to pieces on the slightest provocation. This friable quality showed me *why* I did not get so pronounced a sound at my second examination, nine months after the first. Had I known before I operated what I knew afterward, I would not have done it, but with a lithrotome I would have crushed it and washed it out, though I believe firmly that if I had continued the treatment of the Buffalo Lithia Water a few weeks more the stone would have fallen to pieces. The outer segments were roughened, showing the disintegrating action of the water in dissolving it. I believe the case is

unique in every particular, and shows the value of Buffalo Lithia Water so clearly that I thought it worth repeating. The patient made a complete recovery without an accident to mar it. The total weight of the pieces saved was two hundred and thirteen grains.

Can Lunatics Write Letters to Their Friends?

The subject of the management of lunatic asylums is a perennial one, as we hear so often of charges made by inmates against the officials and physicians in control of the institutions. These charges are very often without basis, and are the result, to some extent, of a disordered mind. In other instances there is, no doubt, good ground for complaint, and the public demands that there shall be an impartial hearing.

It was stated a short time since that Miss Clarissa Caldwell Lathrop was about to bring a suit of \$25,000 damages against the Managers of the State Insane Asylum, at Utica, N. Y. The grounds alleged are the wrongful detention of herself, and the seizure of her letters written to friends asking them to help her to regain her liberty.

Miss Lathrop's lawyer gives the following interesting statement of the scope of the lawsuit: "Of course the main point is in regard to the interception of letters that she wrote to friends asking for assistance. If the managers of the asylums have the right to intercept letters, they have the power to shut a person entirely from the world, whether the person be insane or not. This is a difference between a criminal and a lunatic. In the case of a criminal he is in his position through his own fault, but the insane person is a patient, and deserves all possible consideration. If they stop a person's letters, they virtually remove from that person the possibility of obtaining release.

"The suit is brought not so much for the sake of damages, as to test the point whether or not the managers of asylums have a right to enforce such a rule. I have become interested in the matter, and intend to follow it up and test the question thoroughly. One of the things I will do will be to write to the Postmaster-General, asking if it would not be advisable in case we can prove that the authorities are wrong in prohibiting the forwarding of letters, to place free delivery boxes in all asylums, that the patients may have a chance to correspond without difficulty with their friends. I believe such a system would do away with much of the abuse that without doubt exists in many asylums, and would

greatly lessen the chance of sane persons being held in confinement."

Miss Lathrop was confined for twenty-six months in the asylum, and after her liberation published a book called "A Secret Institution," dealing with alleged abuses at the Utica Asylum, and also at other institutions.

A meeting was held in New York city in December last, by Miss Lathrop and her friends, and a national organization formed called "Anti-Kidnapping League and Lunacy Reform Union."

Drunkenness as Affecting the Right to Practice.

The State of Georgia has recently passed a law forbidding a physician or surgeon from practicing his profession if once convicted of drunkenness; and a somewhat similar result will be caused in Iowa if the decision of the Secretary of the State Board of Health is upheld. The law of that State says that no physician can practice who shows "palpable evidence of incompetency;" and the Secretary construes this to cover the case of habitual drunkenness, and says that a physician of whom this is true should have his license revoked.

In New York, the Penal Code makes it a misdemeanor for a physician to prescribe when in a condition of drunkenness.

The Cincinnati *Times-Star* suggests similar legislation in Ohio, and says: "It is but a few days since a Cincinnati physician was taken off the streets suffering from delirium tremens, while still another is locked up in the workhouse convicted of habitual drunkenness. It is not many years since one of the most prominent men in the Cincinnati Medical Society, conscious of his consuming appetite for rum, invariably wrote his prescriptions twice, each time keeping a copy, thinking thus to escape any mistake which he was fearful his dipsomania might lead him into."

We call attention to the advertisement of Robinson-Pettet Co., Louisville, Ky., on page 28 of this issue. This firm was established forty-five years ago, and enjoys a reputation as a sound, honest, reliable business house. Their preparations are all they claim for them.

Book Notices.

Diseases of the Nasal Organs and Naso-Pharynx. By WHITFIELD WARD, A. M., M. D., Surgeon to Metropolitan Throat Hospital, etc. G. P. Putnam's Sons, New York and London. 1891. Cloth. 12mo. Pp. 165. Price, \$1. (For sale by West, Johnston & Co., Richmond.)

This is a valuable book for the practitioner—plain, practical, sensible—but it lacks an index. It does not treat of diphtheria and such things as may be looked for by the physician in a special book. But it does give full and accurate descriptions of the anatomy, physiology, etc., of the nose and naso-pharynx, and well describes the best methods of treatment of diseases like coryza, catarrh, rhinitis, hay fever, etc. Some surgical procedures are also given.

Handbook of Obstetrical Nursing for Nurses, Students and Mothers. By ANNA M. FULLERTON, M. D., Demonstrator of Obstetrics in Woman's Medical College of Pennsylvania, etc. Second edition. Revised. Philadelphia: P. Blakiston, Son & Co. 1891. Cloth. 12mo. Pp. 222. (From Publishers.)

This is a manual we wish we could get every one pretending to go out as a "monthly nurse" to read attentively; it would save the lives of many a woman in labor, and greatly help the doctor in attendance. Doctors should urge nurses, upon whom they have to depend, to study this and other books like it.

Manual of Hypodermatic Medication: The Treatment of Diseases by the Hypodermatic or Subcutaneous Method. By ROBERTS BARTHOLOW, A. M., M. D., LL.D., Emeritus Professor Materia Medica, General Therapeutics, etc., Jefferson Medical College of Philadelphia, etc. Fifth edition. Revised and enlarged. Philadelphia: J. B. Lippincott Co. 1891. Demi. 8vo. Pp. 540. Price, \$3. (For sale by West, Johnston & Co., Richmond.)

This is practically a new work, and "up to the times," so far as the number of new remedies that are useful hypodermically is concerned. Great care has been taken to state the necessary details as to conditions calling for, and the methods of hypodermic administration of given drugs. The book is instructive and useful to every practitioner. It gives a good chapter descriptive of the indications and

the methods for practising transfusion. Of Koch's lymph, the subject is dismissed by the promise of the author to write up the subject for the sixth edition of this "Manual," if such be required in the next few years by the exhaustion of this edition, by which time, he thinks, "something of a permanent and unequivocal character" will be determined about its uses.

Compend of Human Physiology, Especially Adapted for the Use of Medical Students. By ALBERT P. BRUBAKER, A. M., M. D., Demonstrator of Physiology in Jefferson Medical College, etc. Sixth edition. Revised and improved. *With new Illustrations and a Table of Physiological Constants.* Philadelphia: P. Blakiston, Son & Co. 1891. Cloth. 12mo. Pp. 198. Price, \$1. Interleaved for Notes, \$1.25. (From Publishers.)

This is one of the "quiz-compends"—each one of which was good in the beginning, but has been improved with each edition. It is the most concise statement we know of, every essential fact detailed in ample treatises on Physiology.

Tables for Doctor and Druggist, Comprising (1) Solubilities; (2) Reactions and Incompatibles; (3) Doses and Uses of Medicines; (4) Specific Gravities; (5) Poisons and Antidotes. Compiled by ELI H. LONG, M. D., Professor Materia Medica Buffalo College of Pharmacy, etc. Detroit: Geo. S. Davis. 1891. Cloth. 8vo. Pp. 133. (From Publisher.)

This book should be on the ready reference shelf of every doctor and pharmacist. It is just what it claims to be—"Tables for Doctor and Druggist"—which are daily wanted, and often imperatively demanded. In each of the five tables the arrangement is alphabetical.

Artificial Anæsthesia and Anæsthetics. By DE FOREST WILLARD, R. M., M. D., Ph. D., Clinical Professor Orthopædic Surgery University of Pennsylvania, etc., and LEWIS H. ADLER, JR., M. D., Instructor in Rectal Diseases Philadelphia Polyclinic and College for Graduates in Medicine. 1891. Geo. S. Davis. Detroit, Mich. 12mo. Pp. 144. Paper, 25 cts.; cloth, 50 cts.

This number of "The Physician's Leisure Library" is on a subject always interesting. In its historical part the authors singularly make no reference to the discovery of surgical anæsthesia by ether by Dr. Crawford W. Long, of

Georgia, although the memorable paper by Dr. J. Marion Sims showed that he used it before it was ever thought of as an anæsthetic for surgical purposes by Wells, Morton & Co. This is a valuable monograph.

Wood's Medical and Surgical Monographs. Published Monthly. \$10 a year. Single copy, \$1. Vol. XI. No. 3. September, 1891. Wm. Wood & Co. New York.

This number, with title page, index, etc., completes the eleventh quarterly volume. The two monographs reprinted in this number are: "Foods and Dietaries: A Manual of Clinical Dietetics," by Dr. R. W. Burnett, of London, and "Stertor, Apoplexy and the Management of the Apoplectic State," by Dr. Robert L. Bowles, of Folkestone, Eng. These "Monographs" are worth much more than the prices charged for them by the publishers.

Editorial.

Medical Society of Virginia.

The session in Lynchburg last month was a most gratifying one in its results. The local profession was untiring in efforts to make their guests feel at home. Personal entertainments were numerous and hospitable. The banquet on Thursday night could not be excelled—although the acoustics of the hall were unfortunate for the good speakers and very good for the poor speakers, for they could not well be heard. The Exhibitors' Hall was well arranged under the management of Frank Camm. Among the houses well represented, both by their exhibits and by those in charge, were Sharp & Dohme, of Baltimore; Tarrant & Co., of New York; Chas. Lentz & Sons, of Philadelphia; Virginia Pharmacal Co., of Richmond, etc. Parke, Davis & Co. had their display in a separate room.

The report of the session in this number is necessarily curtailed by want of space. All of the invited guests present contributed papers of value, except Dr. J. J. Chisolm, of Baltimore; it was a common regret that he did not read a paper. The addition to the membership was gratifying. The meeting at Luray next September will be in a section

of the State not heretofore developed ; and as the place is at the world-renowned "Luray Cave," the popular summer mountain resort of the Atlantic States, the session of 1892 is expected to be the greatest success of any meeting of the Society ever held. J. Kemp Bartlett, Jr., Esq., of Baltimore, is Trustee for the Company, and he assures us that "all will be well."

The retiring President, Dr. Wm. W. Parker, of Richmond, Va., deserves special mention for his devotion to the interests of the Society, as manifested by his constant personal attention to every detail during his term of office. Never was a President more justly retired from office as an Honorary Fellow than he. His Address as President was unique, but instructive and intensely interesting as to details and legitimate suggestions growing out of his subject—St. Luke and Jenner as Exemplars for the Practitioners of To-day. His successor as President, Dr. H. Gray Latham, of Lynchburg, rendered the Profession and the people of this State eminently valuable services while President of the Medical Examining Board of Virginia.

Two important resolutions were adopted during the session, of which all the Fellows, etc., should keep themselves reminded. One of these resolutions does away with the "Reporters on Advances," and substitutes fifteen essayists or authors of papers on subjects of their own selection for the next session, which subjects are to be announced to all of the Fellows in three months after adjournment, in order that any other Fellow or Fellows may direct his studies to the same subjects, and thus be prepared to render the next session more valuable by reason of the discussions of the announced papers. These fifteen essayists or writers are to be appointed by the President. The other resolution adopts a Committee on Programme (of which Dr. L. G. Pedigo, of Roanoke, Va., is Chairman), whose duty it shall be to decide what papers that may be offered are to have a reading before the Society. This Committee will have about as hard a task to perform (if thoroughly attended to) as any Committee that ever offered itself for faithful work.

Dr. Hunter McGuire, of Richmond, Va., offers a Prize of One Hundred Dollars for the best original Essay on *Tetanus*—to be awarded during the session of 1892, on the same conditions as those obtaining during the past year. All type-written or printed manuscripts offered in competition must be in the hands of the Recording Secretary, Dr. Lan-

don B. Edwards, Richmond, Va., by August 15, 1892. The Prize is open to members of either of the State Medical Societies of West Virginia, Virginia, or North Carolina, of each of which Dr. McGuire, with his numerous other honors and titles, is an Honorary Fellow or Member.

We regret that we have to omit synopsis of some papers received, and referred to the Publishing Committee without reading, because of the non-attendance of the authors. Among such was the Report on Ophthalmology, etc., by Dr. J. Herbert Claiborne, Jr., of New York; The Drink Problem from a Medical Point of View, by Dr. Fred. Horner, of Marshall, Va., etc. Dr. Phelps contributes as a paper to *Practice*, the substance of his remarks on Club-Foot Operations, etc.

Southern Surgical and Gynæcological Association.

The following is a synopsis of the "Preliminary Programme" of the session to be held in Richmond, Va., November 10th, 11th, and 12th, 1891:

The meetings will be in the Hall of the House of Delegates, Capitol Building.

Members of the medical profession are cordially invited to attend.

President—Dr. Louis S. McMurtry, Louisville, Ky.

Vice-Presidents—Drs. James McFadden Gaston, Atlanta, Ga. and J. T. Wilson, Sherman, Tex.

Secretary—Dr. W. E. B. Davis, Birmingham, Ala.

Treasurer—Dr. Hardin P. Cochrane, Birmingham, Ala.

Judicial Council—Drs. John S. Cain and W. T. Briggs, Nashville, Tenn.; Virgil O. Hardon, Atlanta, Ga., Bedford Brown, Alexandria, Va., and George J. Engelmann, St. Louis, Mo.

Chairman of the Committee of Arrangements—Dr. Hunter McGuire, Richmond, Va.

PAPERS TO BE READ—(Partial List.)

President's Annual Address—Dr. Louis S. McMurtry, St. Louis, Mo.

Remarks on Systemic Infection from Gonorrhœa—Illustrated by Cases—Dr. Bedford Brown, Alexandria, Va.

Rational Treatment of Peritonitis Based upon the Consideration of Pathological Conditions Present—Dr. W. D. Haggard, Nashville, Tenn.

A Medico-Legal Aspect to Pelvic Inflammation—Dr. W. W. Potter, Buffalo, N. Y.

Complications in Pelvic Surgery, and How to Deal with Them—Dr. Joseph Price, Philadelphia, Pa.

Cholecystotomy—Report of Case—52 Gallstones and 10 Ounces of Pus Removed—Success—Dr. W. B. Rogers, Memphis, Tenn.

Some Complications of Psoas Abscess—Dr. J. McFadden Gaston, Atlanta, Ga.

Laparotomies Performed in the Past Year—Dr. Thomas Opie, Baltimore, Md.

Imperforation of the Rectum—Dr. Geo. Ben. Johnston, Richmond, Va.

Case of Induced Abortion for the Relief of the Nausea and Vomiting of Pregnancy, with Remarks—Dr. Christopher Tompkins, Richmond, Va.

Principle of Drainage as Applied to Surgery of the Deep Urethra—Dr. F. W. McRae, Atlanta, Ga.

Neuroses of the Genito-Urinary System in the Male—Dr. Frank Lydston, Chicago, Ill.

Nephrectomy, with Report of Cases—Dr. Edwin Ricketts, Cincinnati, O.

Venomous Serpents of the United States, and Treatment of Wounds Inflicted by Them—Dr. Paul B. Barringer, University of Virginia.

Report of Some Additional Cases of External Perineal Urethrotomy Without a Guide—Dr. J. Edwin Michael, Baltimore, Md.

Growth of Fibroid Tumors of the Uterus After Menopause—Dr. Jos. Tabor Johnson, Washington, D. C.

Part the Shoulders Play in the Production of Laceration of the Perineum, with Suggestions for its Prevention—Dr. W. D. Haggard, Nashville, Tenn.

Pedicle in Hysterectomy—How Formed—Its Subsequent Behavior—Its Final Condition—Dr. I. S. Stone, Washington, D. C.

Case of Pelvic Abscess—Dr. John Browning, Columbus, Miss.

Case of Cyst of the Mesentery, with Remarks—Dr. J. A. Goggans, Alexander City, Ala.

The Female Urethra—Dr. K. P. Moore, Macon, Ga.

Medico-Legal Aspect of Intestinal Surgery—Dr. J. D. S. Davis, Birmingham, Ala.

Albuminuria—Its Relation to Surgical Operations—Dr. J. W. Long, Randleman, N. C.

Senile Gangrene—Dr. Frank Prince, Bessemer, Ala.

Hæmorrhage *versus* Shock—Dr. W. L. Robinson, Danville, Va.

Treatment of Gallstones, with Report of Cases—Dr. W. E. B. Davis, Birmingham, Ala.

Present Status of Cerebral Surgery—Dr. Landon Carter Gray, of New York, N. Y.

Injuries to the Pelvic Floor, and his Methods of Restoring the Same—Dr. Thomas Addis Emmet, of New York, N. Y., etc.

Drs. Hunter McGuire, Richmond, Va.; Duncan Eve, Nashville, Tenn.; A. V. L. Brokaw, St. Louis, Mo.; Charles A. L. Reed, Cincinnati, O., and W. F. Westmoreland, Atlanta, Ga., have not yet given titles to papers promised.

The Railroads generally will sell full fare tickets coming, and one-third price for tickets to return.

All the Hotels are within two squares of the Capitol Square. Murphy's Hotel, Broad and Eighth Streets, is conducted on the European Plan. The other Hotels are on the American Plan. They are the Exchange, Amerisan, Ford's, Dodson's, and St. Claire.

The Local Members will entertain the Association Tuesday night at Westmoreland Club; Dr. Hunter McGuire will have a Reception at his home on Wednesday night. The Profession of the City will tender a Banquet on Thursday night.

Addresses, Papers and Discussions in the Sections of American Medical Association.

Whoever deserves the credit should have it for the useful idea of reprinting in separate pamphlets (from *Jour. Amer. Med. Ass'n*, of this year) all of the proceedings of the respective sections of the late session. The expense is relatively small, and the benefit very great.

Much Matter Prepared for this Number

Has to be omitted, because of the space allowed the report of the session of the Medical Society of Virginia.

The Three Chlorides Elixir of Renz & Henry.—Dr. Dearing J. Robert, of Nashville, Tenn., writes that he has been using this frequently, and he likes it the better the more he uses it—especially as an alterative. It tones up the syphilitic system admirably when it has been pulled down by the use of iodides. It is an excellent tonic in convalescence from malarial and other febrile conditions.

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RICHMOND, DECEMBER, 1891.

Original Communications.

ART. I.—Bradycardia (Bradysphygmie—Ozanam) in Acute Rheumatism.*

By I. E. ATKINSON, M. D., of Baltimore, Md.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS AND OF CLINICAL MEDICINE IN
THE UNIVERSITY OF MARYLAND.

Bradycardia, or abnormal infrequency of the pulsations of the heart, is present, according to recent writers, whenever the heart-beats number less than sixty to the minute. It is undoubtedly a very rare symptom during the course of acute articular rheumatism, and nearly all writers upon this disorder fail to mention it. It is not a little surprising to learn that a not insignificant proportion of hospital patients, studied with reference to the frequency of the heart-beats, should have presented this phenomenon. Of 3,578 patients treated at the Zurich clinic during the years 1884-'86,† eighty-two, or 2.29 per cent., had bradycardia, and of 7,567 cases treated at the Giessen clinic during seven years,‡ this symptom was present in 1,041. At the Zurich

* Read before the Association of American Physicians at Washington September 23rd, 1891.

† Grob. *Archiv. f. Klin. Med.* Bd. 42, 1888, p. 574.

‡ Riegel. *Zeitschr. f. Klin. Med.* Bd. 17, p. 228.

clinic during the years indicated, 286 cases of articular rheumatism were treated, and of these 24 or 8.39 per cent. had bradycardia. Riegel tabulated 42 cases of bradycardia from a total of 144 cases of articular rheumatism treated at the Giessen clinic. This author, however, considered the symptom as occurring during convalescence from acute rheumatism, and not during its active stage; and attributed it not to any specific rheumatic influence exerted upon the heart, but rather to the heart-exhaustion, which, according to Traube's theory, is the cause of slow action of this viscus during convalescence from various acute febrile diseases. Were this true of all cases, bradycardia, arising after rheumatic fever, would not especially interest us; but while, in fact, it does occur in most cases after defervescence, and during convalescence, it certainly does not so occur in all; and even Riegel's own cases, a portion of which served Bötticher* as a basis for his own essay upon bradycardia, afford reasonable evidence that such an explanation cannot be applied universally. Bötticher reports 26 cases of bradycardia among 294 cases of articular rheumatism. At the time of the appearance of the bradycardia, nearly all patients were without fever, but in some cases febrile movement persisted even when the pulse was clearly slowed.

Admitting, then, that it is usually during convalescence from, and not in the course of rheumatic fever, that bradycardia has been encountered, and that when thus occurring it usually has its origin in a cause common to convalescence from a number of acute febrile disorders, we cannot accept such explanation for cases occurring at the outset or during the height of the rheumatic seizure. That bradycardia does occur under such conditions is certain, though it must be confessed recorded observations are exceedingly few. It has been encountered both where rheumatic cardiac complications were concurrently detected, and where such changes could not be recognized. Of the 26 cases reported by Bötticher, manifest cardiac alterations were pres-

* Inaug. Dissert. Giessen. 1888.

ent in only 9; but of the 17 cases in which such changes were not detected, it is not stated how many were already convalescent.

Grob's report is more definite, though he has not attempted to draw sharp lines. Eleven cases in which bradycardia was developed after the subsidence or in the absence of fever, showed no cardiac symptoms whatever; but of thirteen cases in which cardiac inflammation was present, six developed bradycardia during the persistence of fever.

It is not the object of this paper to discuss bradycardia simply as an epi-phenomenon of convalescence; though, in passing, it may be said that the widely-accepted theory of Traube regarding the causation of this symptom after acute febrile disorders, that of "heart-tire," can in no measure be applied to many of those cases occurring after rheumatism, in which fever and increased heart-action have been altogether insignificant. The much rarer phenomenon of bradycardia during the course of, and not after acute rheumatism, will be more especially considered, first in its clinical, and then in its etiological relations. It has been my fortune to treat two cases of acute rheumatic fever in the course of which bradycardia was developed. These, and several other cases found in medical literature, form the basis of my remarks..

CASE I.—D. B., a colored youth, 19 years old, well built and muscular, previously healthy, and without family or personal history of rheumatism, took a cold shower-bath on the night of April 5th, and early next day rode 28 miles on a bicycle. Since then he had not felt well. He was sore, and had pains through his chest and legs. I saw him on the 12th. He then had pains in the thighs. His knee-joints were swollen and tender. Pulse 92; temperature 102.5°. His tongue was coated with a white fur, and his skin was bathed in sweat. There was precordial pain, and a slight to and fro friction sound could be heard along the left sternal border. He was ordered to take 20 grains of sodium salicylate every second hour, and the affected joints were wrapped in cotton.

13th. Temperature 100°; pulse 90. There was no joint

pain, but marked precordial distress. Pericardial friction still present.

14th. Joints fairly free. Severe chest pains. Breathing hurried, and some agitation of manner. Every fourth hour, one-eighth of a grain of morphine.

15th. Profuse and persistent epistaxis. Temperature 101.3°; pulse 90; respiration 30. No joint pain. The salicylate was discontinued on account of its unpleasant effects.

16th. Epistaxis again very profuse. Pulse 90; temperature 100°. Much prostration.

R.—Fluid ext. digitalis.....m. xxiv

Fluid ext. ergot.....f ʒiiss

Fluid ext. ipecac.....m. viij

Aq. ad.....f ʒij

M.—S. Give f ʒj every fourth hour with a view to check the hæmorrhage.

The area of cardiac dullness was not increased. The friction murmur persisted along the left sternal border. In the nipple line, and slightly beyond, a remarkable cardio-pleural friction sound could be heard. It was notably modified by the respiratory movements. It was close to the ear, and distinctly rasping and dry. At the beginning of inspiration, it was heard both during systole and diastole, but at the height of inspiration it entirely disappeared, and only the soft substernal friction could be detected. As expiration was completed, it re-appeared. If the patient held his breath, either in inspiration or expiration, it was no longer heard. The sound was clearly produced by the action of the heart, but depended upon the co-operation of the respiratory organs, and was apparently due to a circumscribed pleuritis of the cardiac area, though it never extended, and no other signs of pleuritis developed. There was still precordial, but no respiratory pain (as distinct).

17th. Tongue coated. Temperature 98.3°; pulse 45, at 11:45 A. M. He had had no digitalis mixture since 11 o'clock the preceding night. He was now taking only one-eighth grain of morphine sulphate every fourth hour.

18th. Pulse 54; temperature 97°. No epistaxis. Pericardial friction not influenced by respiratory movement—heard most clearly in third intercostal space at the left sternal border. It was double, and resembled the sound of crumpled parchment. He was now given 30 grains of citrate of potash every fourth hour.

19th. Pulse 54; temperature 97.5°. A soft systolic murmur could be heard both at the apex and base.

20th. Pulse 60; temperature 99.2°. The pulse was regular, but dicrotic. A small blister was applied to the precordial region.

21st. Pulse 64; respiration 18; temperature 99.4°. Pain in the right shoulder and knee, which were swollen and tender.

23rd. Pulse 64; respiration 18; temperature 100.4°. Return of acute rheumatic symptom. Sodium salicylate in twenty-grain doses every second hour. Friction sound not detected. A soft and prolonged basic systolic murmur. Slight epistaxis.

24th. Pulse 60; temperature 100.2°. Less pain. No pleuritic friction.

25th. Pulse 59; temperature 99.2°. Re-appearance of friction sound all over cardiac area. Most intense toward sternal border. More comfortable. No pain in chest. Cardiac dullness not increased. Sodium salicylate to be given every fourth hour.

26th. Temperature 98.4°; pulse 60. No joint pains. Friction heard along sternal border.

28th. Slight epistaxis. No joint pain. Temperature 98.4°; pulse 58. Pericardial friction and basic systolic murmur marked. Salicylate three times daily.

29th. Temperature 98.4°; pulse 48. Friction very marked, superficial, and crackling. No pain. Bowels always regular, with laxatives.

May 1st. No pain. Pulse 52—slightly dicrotic. Friction indistinctly heard, but only along left sternal border.

4th. Slight fever. Temperature 100°, with pain in the left shoulder and small of back. Copious sour sweating. Salicylate resumed at intervals of two hours. Pulse 72.

16th. No fever. Pulse 72. No friction sound, pericardial or pleural; persistence of systolic basic murmur. Has taken no medicine for a number of days. Slight stiffness of joints. Otherwise well.

CASE II.—M. Y., a student, 20 years old, of delicate frame and appearance, had acute rheumatism when 11 years old, and with it cardiac complications. He consulted me for intra-thoracic pain and palpitations in October, 1889. He then had much hypertrophy of the left ventricle and a loud mitral regurgitant murmur. His pulse, at several observations, varied from 72 to 90.

In the afternoon of *March 12th*, 1890, I was called to see him. He was in bed. His expression was anxious. He was very pale, and complained bitterly of pain in both el-

bows and knees. His temperature was 102° , and his pulse rapid, but not recorded. It was very weak, and exceedingly irregular. His tongue was coated with thick white fur. His bowels rather constipated. Skin bathed in sweat. He was given a purge and thirty grains of potassium citrate four times daily and two drops of the fluid extract of digitalis every fourth hour on account of his feeble and irregular heart-action.

13th. Somewhat better, but has intense epigastric pain, angina-like in character, with a sensation as of impending dissolution. The pulse was still feeble, irregular, and somewhat less frequent. The joints were easier.

14th. Pulse 60 and regular. Digitalis stopped. Epigastric pain still intense.

15th. Very pallid. Epigastric and precordial pain agonizing. Pulse weak, extremely irregular, and beating from 32 to 40 times a minute. An interval of six seconds was counted between two beats. The pain in the joints much less. Morphine sulphate, one-sixth grain, given hypodermically and repeated every third hour, as required.

16th. Joints much better. Temperature 99.5° . Pulse feeble, irregular—60, 65, 70. Epigastric and precordial pain still most severe. Morphine continued as before. Sinapism to painful area. Potassium citrate, grs. xl., every fourth hour.

17th. Pain still excruciating. Temperature 102° ; pulse 56, irregular, and small. Not affected by change of position. Much pallor and anxiety of expression. Diaphoresis free. To-day, for the first time, a pronounced to and fro pericardial friction sound was superadded to the valvular murmur. The pains in the joints were less pronounced, but the precordial pain was even more intense, a dart of pain being felt with every heart-beat. This pain has been alleviated, but not removed, by one-fourth grain morphine hypodermic injections every third hour. Tablets of 1.100th grain of nitro-glycerine each were now given every second hour. The effect of these was to cause flushing of the face and quickened, though still irregular pulse.

18th. Temperature 100.1° ; pulse 108, regular. Rests more easily under the morphine. The pericardial friction modified, but widely diffused over pericardial region. Slight pericardial effusion followed, and underwent slow absorption. The fever and joint symptoms gradually subsided, and without recurrent bradycardia, and, under tonic treatment, he was able to leave town in five weeks.

Somewhat resembling the foregoing case is the following one reported by Blachez.*

CASE III.—A man, 50 years old, had had several attacks of rheumatism which had not involved the heart. When seen by Blachez, he had severe rheumatic pains and a pulse rate of 84–90. The heart-beats were strong, and without murmur. Toward the eighth day of the malady, which had been treated with sulphate of quinine in doses of .80 to 1.20 grams daily, he was seized suddenly with alarming cerebral symptoms, and during the night was semi-delirious. In the morning, the pulse beat only 20–24 a minute: What was particularly remarkable was a state of intermittent syncope, which regularly followed the cardiac pulsations. Between two heart-beats the face grew pale, the eyes closed, and the lips blanched. Then a strong pulsation made the face and labial mucous membrane flush anew. This was so pronounced that, without the slightest difficulty, the pulse could be counted by observing the face alone. Upon auscultation, there were heard the sounds of an extensive dry pericarditis, a superficial double pericardial friction sound. A systolic souffle, soft and prolonged, extended with equal intensity over the aortic and mitral areas. This condition lasted six days; during the first three days, the pulse rate remained unchanged, then it increased to 45, and the synopal phenomena ceased. At the end of eight days, the pulse had regained its normal rythm, and was 72. The pericarditis was favorably influenced by large and repeated blisters. Blachez thought the bradycardia was intimately related with the inflammation of the serous membrane, probably to the more or less profound modification which the superficial muscular layers of the heart experienced from the pericarditis. The patient never had a complete attack of syncope, never an eclamptic seizure. Convalescence was slow.

Still another interesting case of rheumatic fever, with cardiac complications and bradycardia has been reported by Peacock.†

CASE IV.—A girl, 24 years old; quite anæmic. October 15th—Rheumatic fever.

19th. Pulse 100; skin hot and sweating; pain and stiffness in back of neck, left shoulder and wrist and left ankle;

* *Gaz. Hebdom. de Med. et de Chirurg.* 1879. No. 38. P. 599.

† *Med. Times and Gazette.* Vol. I. 1864. P. 56.

heart sounds somewhat flat, without murmur; a sibilant rhonchus over all parts of chest.

22nd. Better, and freer from pain; left ankle red, swollen, and tender; pulse 60; skin warm; sweat copious, acid, and offensive; no heart murmur.

25th. Much better; still some pain in the right arm; left knee, hip, and ankle painful; pulse 42; the first sound of the heart somewhat prolonged; patient complained of severe pain in the cardiac region.

26th. Pulse 36; there was a somewhat harsh, but low systolic murmur, most distinctly heard in the course of the pulmonary artery; pains better.

November 2nd. Much improved and nearly free from pain; tongue clear, somewhat dry; pulse 36; systolic murmur still audible to the left of the sternum at the third costal cartilage.

5th. Pulse 36; sharp; some pains over heart; murmur more diffuse, but still intenser at the base and in the course of the pulmonary artery, not at the apex nor to the right of the sternum.

December 1st. Patient well; pulse 48; steady; murmur still audible at base.

28th. Pulse 60; murmur entirely disappeared; patient still chlorotic.

A similar, but not so satisfactory case, has been recorded by Bouillaud.*

CASE V.—A young man, 24 years old. Fifth day of rheumatic fever; decubitus dorsal; severe pains in nearly all joints, especially in elbows and knees; fever; precordial dullness five inches transversely, four inches vertically; endo-pericarditis.

October 10th. Pulse 92-96.

11th. Improvement; no pain in feet or knees; shoulders more painful than elbows, but less than yesterday; skin bathed in sweat; no pain in precordial region; pulse 84.

15th. Improvement; pulse 60.

16th. Pulse 56.

20th. Heart impulse felt over a considerable area; "a triple 'bruit' irritating the rhythm of 'bruit de rappel.'" The first bruit constituted a murmur, the two others slight friction sounds.

22nd. Cardiac dullness, four inches; one line transverse-

* *Maladies du Cœur*. Vol. I, p. 509.

ly, three inches vertically; pulse 44-48. The patient left the hospital perfectly well by the end of October.

A very interesting case of bradycardia in acute rheumatism with acute cardiac complication was observed by the late Dr. R. L. Macdonnell.*

CASE VI.—A merchant, age 46 years, with a history of previous rheumatism, was attacked with acute articular rheumatism on April 19th, 1885. On the second day 20 grains of sodium salicylate were ordered to be given every fourth hour. This was continued till the tenth day (28th). The disease ran a typical course without discoverable cardiac symptoms, until the 16th day, the pulse ranging from 100 down to 70-80. Upon this date the temperature was still slightly above normal. There was no albuminuria, no glycosuria. Towards evening he felt fatigued. At 7:30 o'clock there were ineffectual efforts to vomit; he threw himself on the bed, feeling faint. The breathing was steady at 20. The pulse beat strongly at 26, without irregularity or intermittency. Patient was weak and faint, but not unconscious. By 9 P. M., the pulse fell to 22.

5th. (17th day). 5:30 A. M., the pulse was 26. More comfortable, and less weak. There was visible pulsation in the radial, ulnar, and carotid arteries. Apex in normal position. No thrill, no increase in the area of cardiac dullness. At the junction of the third costal cartilage with the sternum, there was a soft-blowing systolic murmur, which was not conducted over the normal aortic area, nor toward the apex, around the chest. The second sound was decidedly roughened. Later the pulse was 30.

6th. (18th day.) Condition improved; pulse 58, steady and regular; murmur unchanged; pain and swelling in right wrist; nervous and hysterical; slight nocturnal delirium; evening temperature was 102.4°.

7th. (19th day.) Pulse 70; intermittent, one beat in five; condition of heart unchanged.

8th. (20th day.) Pulse 90; temperature 101; respiration 20; the murmur had disappeared.

Most writers upon diseases of the heart refer to the occasional slowing of heart action in pericarditis, though, since the phenomenon is quite rare, specific examples of such occurrence are quite uncommon.

Graves† had known the pulse to be less frequent than in

* *Medical News*. Vol. XLVIII, 1886, p. 432.

† *Flint. Diseases of the Heart*. 1859, p. 302.

health during the first stage of pericarditis. In his remarkable book, Ozanam* notes that a rare pulse at the beginning of an acute cardiac affection ordinarily indicates the invasion of pericarditis or of endocarditis. Here the phenomenon of slowness as contrasted with the ordinary pulse of inflammation is accounted for by an excitation of the vagus nerve. Similar observations are made by a number of writers.

Malherbe† saw three cases of acute pericarditis with rapid serous effusion in which the respiratory movements were, speaking absolutely, more frequent than the beatings of the pulse, there being 56 respirations per minute, and 48 cardiac pulsations in one case. In another case, the beginning of the disorder was characterized for some days by malaise and dull pains in the precordial region. Then, all of a sudden, violent pain developed in this region, with extreme anxiety and depression. The respirations were 64 to the minute, the pulse 52, feeble and depressed. The hand over the precordial region felt no shock, but there was evident bulging and extended dullness. The heart sounds were feeble and distant; they became a little stronger when the patient sat up, but the impulse was not more noticeable in the erect than in the horizontal position. The resorption of the fluid was quite rapid, and the pulse and respiration resumed their normal relation at the end of three days.

There are a number of recorded observations of bradycardia developing during the period of serous effusion into the pericardial sac. In his excellent paper, read before this Association in 1889 (and published in the *Transactions*), Dr. D. W. Prentiss, presented abstracts of 91 cases of slow pulse which he had found recorded in medical literature. In two of these this condition was present.

One was a case by Mayo,‡ a man 40 years old, with embarrassment of respiration supposed to be due to fluid in the

* *La circulation et le pouls*. Paris, 1886, p. 877.

† *Journal de la Sect. de Med. de la Soc. Acad. du Depart. de la Loire Inf.* Vol. XXXI, 1855, p. 188.

‡ *London Medical Gazette*, Vol. XXII, U. S. p. 232.

pericardium, whose pulse rate varied from 14 to 29. Recovery followed in two months. The other case was reported by Dr. James Russell,* whose patient also presented embarrassed breathing attributed to pericardial effusion and had a pulse usually 29, but on some days as low as 14, and who recovered after three months.

It is evident that bradycardia occurring in acute rheumatism cannot, in all cases, be considered with the phenomena of convalescence from acute febrile disease, as Reigel, Bauer, and others are disposed to do; that it cannot be ascribed to an increased arterial tension occurring with the fall of temperature in connection with the general debility of convalescence, as Truffet would have it, or to heart exhaustion, as Traube has taught, whereby the resistance which the heart muscle opposes to its nervous motor apparatus in consequence of its exhaustion, is notably increased, and the pulse frequency diminished, just as when the irritability of its inhibitory nervous system is increased. When bradycardia develops during the active period of acute rheumatism, it must be ascribed doubtless, either to the specific influence of the disease, acting through the blood directly upon the heart muscle itself, or upon its nerve elements visceral or central, or to the stimulation of the cardiac inhibitory nervous apparatus through inflammatory changes in the heart-muscle itself directly or by extension, or in the endo- or pericardium, implicating the fibres of the vagus nerve.

It is true the usual effect of inflammation of any of these structures is increased frequency of heart action, yet it is widely admitted that inflammation of the pericardium, at least, may be the cause of unnatural slowness of this action. Slowing of pulse is to be expected when the vagus nerve is directly involved in the inflammatory process, or is involved by pressure or is irritated (Eichhorst†); and though myocarditis is nearly always accompanied by increased frequen-

* *Medical Times and Gazette*, 1877, II, p. 60.

† *Weiner Med. Presse*, XXII, 1881, p. 1381.

cy of heart action, Bötticher found five cases of bradycardia in this condition.

In view of the various factors that it is possible to imagine as provocative of bradycardia, it would be unwise to deny the power of rheumatic principles circulating in the blood to slow the action of the heart, working upon the muscle itself or upon its nerves, as is assumed by Grob, and it would be equally unwise to assert that when bradycardia develops during acute rheumatism, it may not depend upon rheumatic myocarditis with or without endo- or pericardial inflammation. At all events in view of the clinical facts that have been adduced, it would seem not improbable that not only may the bradycardia arising during the height of rheumatic fever, but, not infrequently, that developing during the decline, and even after the subsidence of this affection be attributable to the conditions in which the inhibitory nerve of the heart may be involved in irritation; and that, therefore, Traube's theory of heart-tire may not answer for all, even post-rheumatic bradycardia.

A possible source of fallacy in considering bradycardia is the influence of drugs. In many cases of rheumatism, in which this symptom was observed, salicylic acid or salicylates had been given. When injected into the blood, or given by the stomach in large quantities, salicylic acid may lower the pulse rate (Brunton et al.) In cases that have been observed, however, bradycardia developed in some where no salicylic preparation had been given; in some where the use of these agents had long been abandoned, and in some when the slow pulse was present before the first dose of the salicylic preparation had been administered (Grob, Bötticher.) Moreover, doses sufficiently large to slow the action of the heart, are habitually larger than are demanded in the treatment of rheumatism. Both of my own cases recorded here had been taking digitalis before the appearance of bradycardia—the one for the arrest of epistaxis in combination with ergot and ipecac; the other for the correction of a very feeble, frequent and intermittent heart

action. In the first case the dose was very small; in the second, it was moderate, and in both it was discontinued after a few doses. In the one bradycardia was present two weeks after digitalis had been discontinued, and in neither was there the slightest concomitant evidence of an excessive action of the drug.

To sum up, the following conclusions are presented:

1. Bradycardia is observed rarely during the active stage of acute inflammatory rheumatism. It occurs with greater frequency during convalescence from this disease.

2. When it occurs during convalescence, in most cases, probably, it is identical with bradycardia following acute febrile diseases of widely different nature, and directly the result of the febrile action itself upon the innervation or musculature of the heart.

3. When it occurs during the active stage of rheumatic fever, it probably depends upon endocarditis, or pericarditis, or myocarditis (primary or secondary, by extension), whereby the inhibitory nerves of the heart are implicated, and consequently stimulated. Even where the physical signs of cardiac inflammation are absent, bradycardia occurring during the acute stage of rheumatism, may be secondary to undetected myocarditis stimulating the vagus nerve.

4. It is possible, but exceedingly improbable, that this symptom may follow the action of the rheumatic *noxa* upon the cardiac muscle or nervous system directly.

Robinson's Hypophosphites is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

Have prescribed Tongaline frequently for the complaints for which it is recommended, and have found it very reliable in its action.—J. W. Vance, M. D., St. Joseph, Mo.

ART. II.—Regulation of the Practice of Medicine in the District of Columbia.

By ROBERT T. EDES, M. D. (Late of Washington, D. C.)

LATE CHAIRMAN OF COMMITTEE OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

The Medical Society of the District of Columbia has, by its charter, obtained in 1838, the right to grant, through its Board of Examiners, licenses to "such medical and surgical gentlemen as they may, upon a full examination, judge qualified to practice the medical and surgical arts, or as may produce a diploma from some respectable medical college or Society."

Of late years, at least, the function of the examiners has been simply the inspection of diplomas, no examination of candidates being held.

Any one familiar with the number of medical schools in the United States, their rapid birth, and only too infrequent fortunate death, will recognize at once how impossible it is for any committee to keep themselves informed as to the "respectability" of their standing.

No prosecutions have for a long time been made, even in the cases of those practitioners who did not care to go through with even the very simple form prescribed by the law.

There was, therefore, growing up in the District a condition, existing in a large but rapidly decreasing portion of the Union, of practical non-restriction in the practice of medicine, and the seat of the Federal Government was in danger of becoming, like Massachusetts for instance, a dumping-ground and refuge for all sorts of quacks expelled by legal enactments from their original more civilized States.

As to the propriety and durability of such restriction, nothing need be said to physicians. Indeed, little argument is necessary for any one who takes sufficient interest in the matter to acquaint himself with the facts. No reluctance was manifested in the committees of either branch of

Congress to meet the views of the medical profession of the District in this matter, and, in fact, but little opposition was made by any one to the general plan.

There was, however, disagreement as to the form of the regulations, arising apparently from a fear less the rights of certain "schools" should not be duly respected.

Several bills were introduced at the last Congress, of which two, which seem to represent the most matured and deliberate views, are here presented.

House Bill, No. 10,927, is, with one modification, that which was prepared by a committee of the Medical Society of the District, and subjected to a prolonged and careful criticism at several of their meetings.

The modification in question was the omission in Section 9, of the words, "who do not engage in practice among civilians," and was made because it became evident that such a clause would practically defeat the bill.

The two bills are printed side by side, omitting two or three merely formal sections, and changing the order of the paragraphs in the second in order to bring the sections bearing on the same subject opposite to each other.

Neither of the members introducing the bills is to be looked upon as the sponsor, or as necessarily approving. Such an introduction is an act of courtesy.

In comparing the above bills, we wish to indicate some of the points in which that prepared by the Society seems to us the fairer and more practical.

Apportionment of representation of the different "schools" of medicine on the Board.

The "Medical Society" numbers about one hundred and fifty; the "Homœopathic Medical Society" about fifty. The proportion allotted by the bill is five to two.

If we consult the directory, however, a striking disproportion appears between the representation of the homœopathic practitioners called for by the Atkinson Bill, and their relative number as given in the list of physicians. We find thirty-six starred as homœopaths out of a total of five hundred.

Mr. Atkinson, of Pennsylvania (by request), introduced the following bill :

A BILL

To regulate the practice of medicine in the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be for the District of Columbia a board of medical examiners, consisting of eight members of the Medical Association of the District of Columbia, five members of the Washington Homœopathic Medical Society, and two member of the Eclectic School of Medicine, whose term of office shall be four years, or until their successors are appointed.

SEC. 2. That the board shall be appointed by the District Commissioners immediately upon the passage of this act, and every four years thereafter. Vacancies occurring in the said board shall be filled in the same manner. No member of the said board shall be a member of the faculty of any medical school.

SEC. 3. Organization of board.

SEC. 4. That it shall be the duty of the said at any of its meetings to examine all graduates of lawful medical schools appearing before it who may desire to practice medicine or surgery in the District of Columbia; and when a candidate shall have passed a satisfactory examination before the board in session, the president thereof shall grant to such candidate certificate to that effect. A fee of ten dollars shall be paid to said board by each candidate before such examination is had. Examinations may be in whole or in part in writing, and shall be elementary and practical in character, but sufficiently strict to test the fitness of the candidate. No candidate shall be kept waiting for an examination for a longer period than thirty days. In case any candidate shall fail to pass a satisfactory examination before the board, such failure shall not bar the said candidate against a re-examination after the lapse of three months, nor shall the said candidate again have to pay the fee prescribed as aforesaid: *Provided*, That the members of the board representing each school of medicine shall have the right to examine all candidates who are of that school, and the president of the board shall issue the certificate of qualifi-

Mr. Moore, of New Hampshire (by request), introduced the following House Bill No. 10,927 for the Medical Society of the District of Columbia:

A BILL

To regulate the practice of medicine in the District of Columbia.

1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, for the District of Columbia, a board of medical examiners, consisting of nine physicians or surgeons, in good standing, who shall be divided, by lot, into three classes, of three each, and who shall hold office for the term of one, two, and three years, respectively; the term of their successors to be for three years.

The board shall be appointed by the District Commissioners as follows: Five from a list of ten to be presented by the Medical Society of the District of Columbia; two from a list of four by the Homœopathic Medical Society of the District of Columbia, and two at the discretion of the Commissioners, or upon such nominations as they may invite.

Any vacancy in this Board shall be filled by the Commissioners upon nomination of two persons by the authority which nominated the person who caused the vacancy.

No member of the said Board shall be a member of the faculty of any medical school. The Board shall be appointed within a month after the passage of this act.

SEC. 2. Organization of Board.

SEC. 3. It shall be the duty of the said Board at any of its meetings to examine all graduates of legalized medical colleges appearing before it who desire to practice medicine in the District of Columbia: and when a candidate shall have passed a satisfactory examination before the Board in session, the President thereof shall grant to such candidate a certificate to that effect. A fee of twenty dollars shall be paid to said Board by each candidate before such examination is had. No candidate shall be kept waiting for an examination for a longer period than thirty days. In case any candidate shall fail to pass a satisfactory examination before the Board, such failure shall not bar the said candidate against a re-examination after the lapse of three months, nor shall he again have to pay the fee prescribed, as aforesaid.

SEC. 4. Each candidate shall be examined by the whole Board, or representatives thereof, in the following subjects: Anatomy, Physiology, Chemistry, Toxicology, Hygiene, Obstetrics, Pathology and Diagnosis, both medical and surgical. After the completion of the examination and markings in the beforementioned subjects, the candidate shall elect whether he or she will be examined in

cation to candidates who are recommended after such examination by the members of the board who belong to said school of medicine. No examination shall be held by less than three members of the board, one of whom shall be the secretary of the same.

SEC. 6. That the board of medical examiners shall keep a record of its proceedings, which shall be open for inspection, and shall record the name of each candidate, the date of and names of members of the board present at each examination, together with a list of all questions put to candidates and the percentage attained by each.

SEC. 5. Registration of certificates with health officer.

SEC. 8. That no person shall practice medicine or surgery in the District of Columbia after the passage of this act without first having obtained from the said board of medical examiners a certificate of qualification and caused the same to be registered as aforesaid: *Provided*, That all physicians and surgeons who are eligible for registration under the provisions of section seven of this act, who shall procure certificates of qualification and present the same for registration at the health office within sixty days after the date of the first meeting of the said board of medical examiners, shall be taken as having complied with the provisions of this section.

SEC. 9. That any person shall be regarded as practicing medicine or surgery within the meaning of this act who shall advertise by sign in front of office or dwelling as such practitioner, or shall treat or operate for any bodily injury, infirmity, or disease of another. But nothing in this act shall be construed to prohibit service in cases of emergency or the domestic administration of family remedies.

the branches of Materia Medica, Pharmacy, and Therapeutics by the representatives of the Medical Society of the District of Columbia, or by the representatives of the Homœopathic Society of the District of Columbia, or by representatives of the full Board; and the marks awarded by the representatives of either Society shall have the same authority and weight as if they had been awarded by the full Board.

SEC. 5. Examinations shall be practical in character, and shall not exceed in strictness those held by the Medical Examining Boards of the Army, Navy, and Marine Hospital Service, or by respectable medical colleges in the United States. Examinations shall be chiefly in writing, and the questions and answers shall be recorded. Portions of the examination may be oral, at the discretion of the examiner; but notes of such oral examination taken at the time by the examiner shall be recorded with the record of the written portion of the examination. The Secretary shall record the name and age of each candidate, the college at which he received his medical education, the names of the members of the Board present at each examination, as well as the questions, answers, and marks. These records shall be placed in the custody of the Secretary, and shall at all times be open to the inspection of candidates or their duly authorized representatives. The records of examinations, without the names of candidates, may be published by the Board at their discretion.

SEC. 6. Registration of certificates with health officers.

SEC. 7. No persons shall practice medicine in the District of Columbia after the passage of this act without first having obtained from the said Board of Medical Examiners a certificate of qualification, and caused the same to be registered, as aforesaid, except as herein-after provided in Section 9.

SEC. 8. Any person shall be regarded as practicing medicine within the meaning of this act who shall advertise by sign in front of, or upon an office or dwelling, by the use of the words or letters Doctor, Dr., or M. D., or who sets forth by these or other words or devices that he is a physician or surgeon in the ordinary meaning of those words, or shall represent himself as competent to treat or operate for disease or injury.

SEC. 7. That all physicians and surgeons, in practice in the District of Columbia on the date of the passage of this act, and members of the Medical Corps of the United States Army, Navy, and Marine Hospital service, who may be detailed on duty in this District to heal the sick, shall be granted certificates of qualification by the board without any examination whatever. Salaried employees of the United States Government, other than those hereinbefore provided for, shall not be eligible for examination or certification, and shall not be registered as practitioners of medicine or surgery in the District of Columbia.

SEC. 12. That nothing in this act shall be taken as including or affecting in any way the business of the registered pharmacist, nor shall it include physicians or surgeons residing elsewhere and called in consultation with resident practitioners of this District, nor shall it apply to women who pursue the avocation of midwife.

SEC. 11. That any person violating any of the provisions of this act shall be punished by a fine of not less than twenty dollars nor more than one hundred dollars, or by imprisonment for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment for each and every offence. It shall be the duty of the said board of medical examiners to inform the attorney of the United States for the District of Columbia of any person suspected by them of violating any of the provisions of this act; and it shall be the duty of such attorney to prosecute all persons violating the provisions of this act.

(Examination of midwives not provided for in this bill.)

SEC. 14. That the fees received by the board shall be applied towards its expenses. If any surplus remain, it may be distributed among the members of the board as compensation for their services as members, but otherwise they shall receive no compensation whatever.

SEC. 9. That all legally licensed physicians and surgeons who are in practice in the District of Columbia on the date of the passage of this act, and duly registered at the health office, and commissioned officers of the Medical Corps of the Army and of the Navy and the Marine Hospital Service, who may be now or hereafter detailed on duty in this District, shall not be subject to the provisions of this act. Nothing in this act shall be construed to prevent a qualified practitioner from another State from practicing his profession in the District of Columbia when specially called, provided the visit or practice is of a temporary character, and is not in consequence of, or pursuant to, a public advertisement.

SEC. 10. That any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty dollars nor more than one hundred dollars, or by imprisonment for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment for each and every offence, in the discretion of the court. It shall be the duty of the board of examiners to inform the attorney of the United States for the District of Columbia of any persons suspected by them of violating the provisions of this act, and it shall be the duty of such attorney to prosecute all persons violating the provisions of this act.

SEC. 11. After the passage of this act all women desiring to practice as midwives in the District of Columbia shall be required to obtain from the aforesaid Board of Examiners a certificate for registration in the Health Office. Said certificate shall be granted after an elementary examination in Hygiene and Obstetrics, and proof that the applicant has received such an amount of practical knowledge as may be deemed sufficient by the Board. The fee for such examination shall be five dollars. No person shall be permitted to practice as a midwife in the District of Columbia without such registration, and any such person so practicing shall be liable to the penalties above provided in the case of practitioners of medicine.

SEC. 12. The fees received from candidates for examination shall be turned into the treasury of the District of Columbia. Each member of the Board shall receive a compensation of — dollars for each day of actual attendance on the meetings of the Board, and the Secretary shall receive a salary of — hundred dollars, to be paid from the treasury of the District of Columbia.

SEC. 13. That the board shall make an annual report to the District Commissioners.

SEC. 15. That such portions of the charter of the Medical Society of the District of Columbia as refer to the granting of licenses and to examinations, and all other acts or parts of acts inconsistent or in conflict with this act are hereby repealed.

SEC. 10. That no person not a registered practitioner of medicine or surgery shall offer for sale any drug, nostrum, ointment, or appliance of any kind, or by writing, printing, or other methods, profess to cure or treat disease or deformity by any drug, nostrum, manipulation, or other expedient in this District without first obtaining from the secretary of the said board a certificate setting forth that the said article or articles may be offered for sale or the said method of treatment allowed without injury to the public welfare; and it shall be the duty of the said board to regulate the issue of the said certificates.

SEC. 13. The Board shall make an annual report to the District Commissioners, including a financial statement.

SEC. 14. Such portion of the charter of the Medical Society of the District of Columbia as refers to the granting of licenses and to examinations, and all other acts, or portions of acts inconsistent or in conflict with this act, are hereby repealed.

SEC. 15. The Board of Examiners shall have the power to revoke the certificate, and cause to be erased from the register the name of any legally licensed practitioner who shall be convicted of criminal abortion or infamous crime.

SEC. 16. This act shall be in force from the date of its passage.

Certification of drugs, methods of treatment, etc., not provided for in this bill.

It certainly cannot be said that the Society's bill discriminates unfairly in the matter of numerical representation.

The Atkinson Bill provides for two members of the Eclectic School of Medicine. There is only one person indicated as such in the directory. A sort of supplementary bill (H. B. 11,565), provides that the "Botanical School of Medicine shall have all the rights, privileges, and protection now provided by law for allopathic and homœopathic schools within the District of Columbia."

There are two botanic physicians in the Directory. The Society's Bill leaves two places to be filled by the District commissioners independently of any nomination from the two larger bodies. They can assign them, if they think the numbers or importance of botanics or eclectics entitle them to representation, to such persons.

Term of Service.—A certain degree of permanency is assured in the Society's Bill by the division of the Board into classes. Whether the selection, by the Atkinson Bill, of four years as the term, after which the whole Board shall be renewed, has anything to do with the prospect that the political complexion of the District Government is liable to change at this interval, cannot be stated. Certainly the ex-

perience of similar bodies would be in favor of preserving a continuity of existence, and removing it, as far as possible, from any political vicissitudes.

It will be noticed that the *scope and degree of strictness in the examination* are much more carefully defined in the Society's Bill than in the other.

This may or may not be of great importance. Of course the real criterion is in the hands of the Examining Board, and depends upon their views as to how much ought to be required of a man who proposes to take the life and health of his fellow citizens in his hands.

The most important point of difference between the two bills, and this is undoubtedly the principal reason for the existence of two bills instead of one, is, whether the examination is to be conducted by a *conjoined Board*, or, practically, by two or more *different Boards*. The argument in favor of the conjoined Board is that it affords a guarantee of a uniform minimum standard of attainments, and that all comers shall be subjected to the same or nearly the same test.

That such uniformity is desirable, and is the only fair arrangement, seems so obvious, that it needs only to be stated.

The arrangement proposed in the other bill has a fallacious appearance of fairness, but it is certainly not reasonable to require the results of the examination made by a partial Board to be certified to by a president, who may have had, either directly or by his representative, no control whatever over its scope or methods.

The objection to the conjoined Board lies undoubtedly in the fear lest the candidates belonging to the "school" represented on the Board by the numerical minority, should be discriminated against by the majority. It seems to us that the Society's Bill provides sufficient guarantees against this in two ways:

1st. The publicity of the record. (This is present in both bills.)

2nd. The provision that in eight subjects out of eleven, as to which eight there is no disagreement between differ-

ent "schools," the marks shall be awarded *before* the candidate states by which "school" he elects to be examined in the remaining three.

In those subjects alone in which the "schools" differ, *i. e.*, materia medica, pharmacy, and therapeutics, are the examinations separate. In these the marks awarded by either set of examiners have the same force as if given by the full Board. It could easily be arranged that the candidate need not disclose the name of the college from which he graduated until after the marks were given for the first part of his examination.

Objection to a conjoined Board may perhaps be made from another point of view, that suitable persons, for ethical or sentimental reasons, will be reluctant to serve on a Board thus constituted.

If however, it shall appear to them, as it does to us, that the other alternative fails to secure one of the really important objects of having any bill at all, *i. e.*, uniformity of qualification and impartiality as to acquirements, it is to be hoped that gentlemen will be found who can sink their personal (let us say, for the sake of argument, well founded) prejudice for the general good of the community and its protection against gross and unscrupulous ignorance, waiving for the occasion the question of theoretical and ethical divergence.

Such Boards have worked well in practice elsewhere. Such a one now exists in the State of Virginia, which has a law of this kind, in operation for several years, acting with efficiency and to the satisfaction of the medical profession and the people of the State.

The definition of the *persons who are to be considered as violating this act*, by the practice of medicine without a license, is a somewhat difficult question. It involves the whole matter of the purpose and policy of this bill.

There are two distinct classes of persons among the laity to whom this bill is of interest. The greater part of the community can and do find out for themselves who are reputable and skillful members of the profession of medi-

cine, and they act accordingly. This bill does not materially affect their personal welfare.

There are, however, those who, in a general way, would prefer to employ an educated and intelligent physician, but who are unable or do not care to take the trouble to distinguish him from the ignoramus. A doctor is a doctor to them.

Again, there are those who believe that, often or always, they are more likely to recover under the care of the natural healer, the faith-curer, the clairvoyant, *et id genus omne*.

For the first of these classes, this law, if carried out, is expected to provide, by securing that the usual designation of a physician shall testify to a certain amount of education of the usual and ordinary kind; and that if they apply for relief to a person who publicly announces himself as a physician they will be taken care of according to the present status of the medical art.

With the other class it is desirable not to meddle. First and foremost, they cannot be prevented from consulting whom they wish and believe in. Any law which tries to drive out such persons will be as ineffectual as a prohibitory liquor law in a large city with no public sentiment behind it.

Secondly. Even silly people have their rights; and it is well known that one of the most dearly cherished and frequently exercised rights of the American citizen is to be humbugged.

If he chooses to depend upon intuition, messages from another world, or upon those occult forces which, for some strange reason, seem to exist in inverse proportion to the intelligence of the possessor, rather than upon a science which we all admit to be still imperfect, I do not think it is wise to try to prevent him—certainly not otherwise than by advice.

No one ought, however, to be cheated into taking one thing when he wants the other. If the ignoramus is to be sought, it is certainly no hardship to either party to require

that it should be under his proper title, and not under that which usage assigns to the educated medical man.

If my neighbor, being a mechanic or a gentleman of leisure, chooses to give me legal advice, and I choose to follow it, I ought to be allowed to do so, even if I lose my case thereby; but if I go to a man whose sign states that he is an attorney at law, I have a right to expect that he shall be not only a man of common sense, as my neighbor also may be, but acquainted with the principles and technicalities of his profession, and having a knowledge of the practice of the courts. The bar associations take care of this, as they ought to do; and when they turn out a man for unprofessional conduct, one hears nothing of that cry of "bigotry," which is so loud when medical men adopt similar measures for the purification of their ranks.

A provision similar to that contained in the last paragraph of section 7 of the Atkinson Bill was seriously considered by the Society. Although it was fully recognized that the practice against which it is directed is a pernicious one, this provision was considered illiberal and unwise, beside being inexpedient, as likely to imperil very seriously the chances of the bill as a whole. It was thought that the practice of medicine by government employees, although unjust to the resident practitioners, was better left to be dealt with in some other way than by attempting its restriction in a bill really intended for another purpose—*i. e.*, the driving out of incompetent pretenders.

Each of the two bills has a provision peculiar to itself and not represented in the other.

The Society's Bill provides for the *examination of midwives* in elementary obstetrics and hygiene. It has been represented that these women are very poor, and that they practice amongst the poorest classes; and hence should not be subjected to the hardship of an examination. Scientific attainments, indeed, should not be expected; but in view of the supreme importance attached to asepticism in the modern practice of midwifery, of the undoubted existence of an increased amount of puerperal diseases, and a higher death

rate, when extreme cleanliness is disregarded, the fact that they are almost the only attendants of a large number of poor women is certainly no reason for not exacting at least a knowledge of the principles and practice of hygienic cleanliness, and enough of the mechanism of labor to be aware when they need assistance. This provision is looked upon as a very important one.

The Atkinson Bill provides for the *certification*, by the Secretary of the Board, of various *drugs* and *methods of treatment*.

It would be impossible to carry out this thoroughly without the expenditure of an amount of time which few practitioners have to spare, beside an amount of money which the bill takes no means to supply.

A certificate to the harmlessness of a drug would be either a mere formality, or a guess based on general repute, or on some accidental experience, or else it should be a *bona fide* judgment based on a careful analysis or experiments. An attempt to issue certificates of the latter kind would call for a large laboratory and a board of experts.

In either case, the certificates would present the singular spectacle of a Medical Board furnishing gratuitous advertising to any number of proprietary and empirical remedies.

It seemed to the Committee much better not to meddle with the subject at all than to attempt any regulation with the very limited means likely to be at the disposal of the Board.

As regards methods of treatment, which may reasonably be supposed to mean electricity, massage, manipulations, and exercise of various kinds, it seemed that if the other provisions of the bill are carried out, they call for no interference. Their practitioners cannot assume the title of "Doctor" unless they pass the examination. They must set themselves forth as being whatever they are. Persons wishing to employ them do so knowingly, and either on their own responsibility, as they have a perfect right to do, or on the advice of their physicians, which, in the indi-

vidual case, is worth far more than a general certificate from a Board.

In conclusion, it may be said that the bill presented by the Medical Society of the District of Columbia aims chiefly to secure that a certain well-defined and generally understood title shall be a certificate of a certain grade of professional attainment, and shall carry with it certain privileges, and that those who have it not shall not usurp it.

ART. III—Trachoma—Clinical Lecture.*

By J. H. CLAIBORNE, Jr., M. D., of New York, N. Y.

There is scarcely a disease in the whole range of ophthalmology that demands such clear knowledge and such accurate attention of the surgeon as trachoma. If you were to sit by the side of an ophthalmologist in his clinic, you would be struck by the frequency with which it occurs. It is very common among the lower classes. Hibernians especially, and Jews, also are peculiarly subject to it, as they are to all other diseases of the eye. Some years ago, when I had the opportunity to sign certificates of blindness in this city, I observed many cases in which it was due to trachoma, and noticed that most of them were Irish people. The degree of deformity which resulted from it was something fearful; the contraction of the palpebral conjunctiva, in some, the almost total obliteration of the sac, and other changes were so horrible that you would not believe it unless you could see for yourself the results of neglected trachoma.

Trachoma was recognized long ago. As far back as the time of Hippocrates it was unquestionably known. When Napoleon Bonaparte made his way to Egypt, his troops were attacked with granular lids. As to whether this disease known as "Egyptian ophthalmia," was a true trachoma, or some form of pustular disease, is questionable; but certain it is that the disease was in a measure granular, that it

* Delivered at the Polyclinic Hospital, October 24th, 1891.

was a chronic affair which lasted a long time, and that it was not only contagious but infectious. The word contagious I take to mean something that is communicable from one person or thing to another; whereas the infectious disease probably is one that is transmissible not only from direct contact, but from the air; the wind blowing might transfer the materies morbi from one person to another, and from one part of the country to another, thus infecting many people. In no other way can we explain why trachoma will attack a whole school, camp or town, and why people in different parts of a community should be taken with it simultaneously.

If you ever happen to have observation over a school, you may possibly come across an epidemic of trachoma. It frequently occurs here in the orphan asylums, though why it should attack these unfortunate children, particularly, I don't know. In jails, too, it sometimes occurs. At the present time, the principals of schools have become wise, and when a child's eyes become inflamed he is at once sent to a physician, which shows that a large degree of precaution is taken in schools. Of course, they don't know the difference between a contagious affection and one that is not, but they draw the line at any form of sore eyes.

Granular lids, then, is an extremely powerful factor in ophthalmological diseases, and we stand, to-day, in a position which is probably in advance of the old, so far as method of treatment is concerned, but in which we make use of all the remedies used long ago.

The disease has three stages, but the last is so different from the first, that you would not recognize it as the same disease. If you ever see such cases as I have seen, you would be struck with the ravages of this apparently simple affair. In one case the eyeball was reduced to the size of a small shoe button; in another, the eye was so entirely obliterated that you could hardly tell where the upper and lower lid parted from one another.

In the early stages, trachoma is extremely characteristic, though if you can differentiate acute granular lids from

acute catarrhal conjunctivitis, you can do more than most surgeons can, for these two diseases are, in the beginning, very similar. On the first day there will be mild irritation; on the second or third, the patient will complain of a gritty feeling; at the end of the fourth day, the secretion will be very profuse and purulent; the sensation of grittiness under the lids is so uncomfortable and painful, that even the most careless and ignorant person will generally go to a physician; the condition is also very unsightly. The only way to tell the difference between these two affections is to evert the upper lid and tell the patient to squeeze while holding it in that position; this forces out the inner folds of the lids. You will at once detect a large number of granulations; they will appear like the little nodules on an unripe mulberry, which they resemble much more than fish-spawn.

In the second stage they look more like the latter. When you see these fish-spawn granulations, no man with eyes in his head can fail to recognize the disease.

The sooner we come to exact terms, the more scientific we will become. Such names as Graves' disease, etc., mean nothing. Hence, for example, if we speak of this affection as "granular lids," the name conveys the condition; while if we say "trachoma," a man does not know what it means, unless he knows Greek, or some one had told him that trachoma meant something rough. I think it is best to make use of an English word that describes the condition.

I repeat, no man can easily differentiate trachoma from acute catarrhal conjunctivitis in the first stage; granulations are present in both, but they are more exuberant in trachoma, and that is the main point of difference; the secretion is more abundant in catarrhal conjunctivitis.

In the second stage of trachoma, the lids are not so swollen, the discharge is lessened, and there is not that burning sensation. On overting the lids, you will notice that the fish-spawn granulations are no longer red; they are more or less flattened out by pressure, and look more like fish-spawn on the water. A long line of white, fatty, pulp exists, running

over the lid ; this is the stage par excellence when we make use of those treatments that do away with the granulations. How long this state of affairs will persist, no one knows ; no surgeon has had the courage to sit down and watch how long this will last, and until some one does that, we will never know. It is when the disease has arrived at this stage that stern measures of treatment are employed.

Trachoma will eventually reach a third stage, the stage of cicatrization. The granulations pass away, leaving scars where they existed more or less contracted and drawn ; true scar tissue takes the place of healthy tissue, and this may be very extensive if the case has never been treated. Still, under the most skillful treatment, some contraction will occur ; hard, dense, unsecreting mucous membrane will be formed.

We make use of the term granulation because the elevations in trachoma resembles the granulations seen in a wound that is in the process of repair by second intention.

But Nettleship has shown that this is not the same thing which we find in granulating wounds ; nevertheless, though they do differ histologically, they are very much the same thing, and result in the same thing—nameiy, scars. The papillæ of the conjunctiva are enlarged in trachoma and the interior is filled with white blood cells, serum and an occasional blood vessel ; so there is not really very much difference, and I am not inclined to regard the term granulation with as little favor as some do.

As concerns the etiology of this disease, I have not much to offer. Whatever its cause, it is one which is communicable from one to another, as it is both infectious and contagious. Though it has been recognized for long years, it was not until the germ theory began its great revolution, in late years, that a specific cause was found for trachoma. Science has discarded the virus theory of disease, and had adopted the living cause, which acts by multiplication of its kind. With this in view, Michel, of Germany, has made a very careful study of trachoma during an epidemic which resulted in the finding of a coccus, which he called the tra-

choma-cocci. This he found in all cases of trachoma in a certain epidemic, and attempted to cultivate it in gelatine. He inoculated a rabbit, setting up trachoma, and from the rabbit he inoculated a human being, thus forming what is called a cycle. But, strange to relate, after he had made this experiment, there were other epidemics in which he was not able to find this coccus; so he was obliged to write that his views were modified on the subject. I had the good fortune to know his assistant, who made all the gelatine used, and who worked with him in these epidemics, and he said he had his doubts. There are many microbes to be found on the human conjunctiva in health, from which cultures have been made; so when a man picks out one kind in a disease it is a very difficult matter to say that it is the microbe of that disease. We can be absolutely certain about only one, and that is the coccus of gonorrhœa. Cocci taken from the urethra can be made to grow in gelatine; from that culture persons can be inoculated, and so on indefinitely. Generations do not seem to make any difference.

When Egyptian ophthalmia was rampant, no treatment had any effect upon it; no one knows just what the disease was, for it has changed its character since. The illustrious Koch, of Berlin, has examined the secretion in Egyptian ophthalmia, but has not arrived at any conclusion; he discovered a coccus and a bacillus. Such an examination is not worth much, and proves nothing; for any number of microbes might cause conjunctivitis. As to whether this ophthalmia which exists to-day in Egypt, is a simple trachoma or a catarrhal conjunctivitis, there seems to be some doubt; but it is highly probable that it is a mixture of the two.

In the third and last stage of trachoma, there is simply cicatricial contraction. The lids may be fastened together, and the palpebral conjunctiva so changed by scar tissue that entropion is frequently caused. The cornea will often become so uneven, vascular, and cloudy, as a result of the constant friction of the roughened lids against it, that the eye will be practically blind. One of the most unfortunate

state of affairs that takes place is the dryness of the conjunctiva, xerosis. There is a disease known as xerosis, for which a microbe has been found; but in these cases the name is applied to the condition of dryness. When a person who has been unfortunate enough to have granular lids arrives at an old age, this dryness becomes painful, and there is no relief for it; the case is hopeless.

The treatment can be summed up very briefly. From the earliest time some form of treatment has been attempted, consisting principally of washes and astringents. Not more than twenty or thirty years ago, it was customary with many surgeons to cure trachoma by inoculating the eye with gonorrhœal pus, setting up a severe conjunctivitis which, in the great majority of cases, destroyed the eye, leaving the patient worse off than he was before. This treatment has finally fallen into the desuetude which it deserved. Nitrate of silver has long been used, either in a strong solution or in the solid stick. Another therapeutic agent was jequirity, or the praying bean, so called because the monks made rosaries of them by stringing them together; this was used in the form of a solution, made by steeping the beans in water, a one or two per cent. strength being employed; and it was applied with a brush to the lid. An inflammation was set up by it, very much like gonorrhœal conjunctivitis, but not quite so severe, and at the end of several weeks the eye was either cured or destroyed.

De Wecker, of Paris, announced that he had discovered a specific for trachoma. It has also been used by Panus, of Paris, and hosts of others. De Wecker and Knapp afterward reported eyes lost by its use. I have not seen it used for eight years, and have never used it myself.

The next remedy is the sulphate of copper, which stands as an old therapeutic measure; and, wherever you go, you will see a stick of sulphate of copper in the hands of an ophthalmologist. It is applied to granular lids every day for months. Solutions of the sulphate of copper have been used, but they run up under the lid and cause irritation.

Within the last few years entirely new methods of treatment have been adopted. The granulations have been snipped off with scissors, and burned off with the electric cautery; but the latest method, which is agitating the profession, is that of "expression," which consists in pressing or squeezing out the little tapioca-like grains. Forceps have been designed for this purpose; indeed, so many were shown at a late medical meeting in this city, that it became quite a joke. At least eight men rose and began: "Gentlemen, I have a little instrument, which I have devised, etc."

Some surgeons use their thumb-nails to press out these granulations; Noyes and Knapp use forceps, something like a stirrup, with a roller attached; a little bar rolls over the lid, crushing the granulations. Good results are produced with it, and Knapp has written a paper on the subject; but, remember, that this instrument has only been used for a few months, and wait awhile to see how it works.

Grattage comes to us from the clinic of Abedie, of Paris. He slices the granulations in two, and scrubs them with a finger-nail brush, dipped in 1-500 bichloride solution. Sufficient time has not elapsed since the introduction of this treatment for one to be able to judge of the best means of carrying it out. I do not think that the best results will be got by cutting or scratching these granulations, but by some form of instrument with which they can be squeezed out.

There is one thing to which I wish to draw your attention: The difference between follicular conjunctivitis and granular conjunctivitis. Unless the granulations are very exuberant, no man can be sure that the disease is granular. If there are no granulations to speak of on the upper lid, whether or not there are many on the lower lid, I am accustomed to diagnose the case as follicular conjunctivitis. In the latter case, the eye will be well in a week or two, but if the disease is granular lids, it may last for months.

ART. IV.—**Sexual Neurasthenia as it Stands in Relation to the Border-Land of Insanity, and Insanity in General.***

By F. B. BISHOP, M. D., of Washington, D. C.

Within the last few years, the functional nervous disease known as neurasthenia, nerve exhaustion, or nervous prostration, has created considerable discussion in the various Medical Societies, and has been the subject of much serious thought. A few able neurologists have contributed valuable articles on this subject to the various periodicals and hand-books on medicine; but up to the present time but few of the leading text-books mention the disease at all, or give it only a passing notice. To the late Dr. Geo. M. Beard, of New York, I believe, belongs the honor of classifying this special form of neurasthenia, and bringing it, after much difficulty, prominently before the profession. He tells, in his excellent little work on Sexual Neurasthenia, that "the earlier writings on this subject were rejected at first, almost uniformly, by those to whom they were offered for publication. The original essay on neurasthenia, which has been the parent of such a large literature in different parts of the world, was thrice rejected by medical journals before it was finally published, after it was read before the New York Medical Journal Association, in the *Boston Medical Journal*, April 29th, 1879." He then goes on to say that "The absolute non-attention bestowed on the paper after it was published was a full justification of the editors who rejected it." This quotation from this eminent and fair-minded neurologist, and the stand that neurasthenia, and especially sexual neurasthenia, has taken, within a short time, among the functional neuroses, proves that his ideas were in advance of the times, and that the medical mind was not yet prepared to accept them.

As the subject is yet comparatively new, there is much room for serious thought and speculation. And the object

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 9th, 1891.

of this paper is to discuss the position it holds in relation to that indefinable territory known as the "border-land of insanity," and insanity in general.

I will not attempt to describe all the symptoms, as their names are legion, but will content myself with a few of the most prominent and common, such as morbid fears, hallucinations, delusions, illusions, morbid impulses, loss or impairment of memory, flushing of heat and cold, palpitations, increase or diminution of the reflexes, headache, indigestion, partial or complete loss of sexual power, cold penis, weeping penis, seminal emissions, sweating testicles, and sweating hands. These, and many more symptoms too numerous to mention, will be found in the different cases that come before us. One or more of them may be present in any case of neurasthenia, from any cause whatever; and as masturbation and excessive coition are responsible for sexual neurasthenia, we would naturally expect to have the symptoms arising from the genital organs most prominent, and this is generally, but by no means always, the case.

Dr. Beard, in his work on Sexual Neurasthenia, referred to, has set forth a few facts worth remembering, which I have never seen mentioned by any other writer.

The *first* is that in very strong and muscular persons impressions are transmitted more slowly through the motor, sensory, and sympathetic systems; and that owing to the resistance offered by the nerves, the discharges of nerve-force, produced by an irritation in an individual organ, is liable to produce a local disease in the organ itself, or in the one which may be in most direct communication with it, of an organic or structural character.

Secondly. The moderately strong, where the impressions pass with less resistance, but still pass slowly, lingering long enough to impress in their course one or more of the four grand divisions of the sympathetic system—viz: the brain, stomach, spinal cord, and genitalia.

Thirdly. Persons of a very weak and highly strung nervous organization offer so little resistance to impressions that, from any source of irritation whatsoever, the impres-

sions are flamed immediately all over the entire system, impressing each and every individual organ alike, equalizing the irritation, temporarily prostrating the patient, but affecting thereby no particular organ; or, in other words, the disease remains functional—never becoming organic, or, at least, very rarely.

Now, Blandford on Insanity, in treating of insanity of masturbation, says, on page 41: "The insanity which masturbation produces is, for the most part, seen in young persons; but there is another form found in those of middle age, often the result of sexual excess or masturbation, which is known under the name of general paralysis."

Again, a little further on, he says: "As, in some persons, mere nervous exhaustion and bodily disorder are produced by masturbation and sexual excess, while in others genuine insanity is the result."

From these quotations, I imagine that it will be readily seen that Dr. Blandford has graphically described the strong, the moderately strong, and weak and nervous cases of Dr. Beard.

The *strong* cases are those in which the irritation of masturbation or excessive coition, re-acting upon the brain for many years, has eventually, in the very prime of life and apparent physical development, produced something more than a mere functional disease. The patient wanders, and lingers, perhaps, for years, on the border of mental rapture and moral responsibility,* during which time his actions and speech become what is termed by his friends peculiar, this peculiarity increasing with time, marked by great extravagance of word and action. He eventually passes that imaginary line, and through a portal which has for its motto that which is said to have greeted the eyes of Dante, as he passed the entrance to the infernal region, "Abandon hope, all ye who enter here," for I know no well authenticated case of cure of general paralysis of the insane.

* NOTE.—I did not mention legal responsibility, for that term is as indefinable as that of the border-land of insanity, and is too often marked or distinguished by the amount of cash or influence that the patient and prisoner or his friends may have.

In the moderately strong, where the irritation is transmitted with more ease and less slowly from point to centre, and from centre to periphery, and where the brain, in its undeveloped condition, is easily impressed, its functions become perverted, and give expression to various nervous phenomena, among which may be mentioned melancholia, either in a modified or exaggerated degree. The patient, under these conditions, may linger for awhile in the borderland, saying and doing many foolish things, accompanied by hallucinations, delusions, illusions, morbid impulses and morbid fears; but these may still be explained away, and the patient himself will tell you that he knows that they are imaginary, showing that his reasoning powers are still intact. Even at this stage the progress of the disease may be checked, and the patient often cured, if the source of irritation is found and removed, and the patient judiciously treated. But if the irritation continues, the will-power becomes weakened; he has less and less power to resist his excesses; the morbid fears, hallucinations, delusions, and illusions become more fixed and real; they can no longer be explained away, neither by the evidence of his own senses, nor by any argument or evidence that you can produce; he crosses the border and enters the dark region of insanity.

In the weak and extremely nervous, the case is quite different—at least in the majority of cases; here the resistance offered by the entire nervous system is so slight, and the irritation is transmitted with so much ease, and with such rapidity, that the brain is saved at the expense of the body. Every individual portion of the organism fares alike; the patient is prostrated by every shock; he becomes a physical wreck; but his mental faculties are saved, both because the brain and nerves offer so little resistance that the irritation does not remain long enough in one place to produce structural damage; and excesses themselves must, of necessity, be limited, as they prostrate the patient and compel him to resist, rest, and recuperate, from symptoms of a physical nature, such as vertigo, palpitations, dyspepsia, etc.

The object of this paper is not to prove that neurasthenics often become insane, but to call attention to the fact that if the disease is recognized and properly treated while it is yet neurasthenia, we would be able to save many a poor sufferer from a condition worse than death. In reality, they are often treated after a very superficial examination, or without any examination at all, drifting from doctor to doctor, until they finally fall into the hands of some quack, who gets all the doctors have left of his money, and by that time probably he is incurable.

When strong, healthy young men consult us on account of a "weeping penis," nocturnal emissions, and the emission of semen, during defecation or micturition, with or without morbid fears and other symptoms, it should arouse our suspicion and lead us on to the careful examination of the parts, and a strict catechizing of the patient; and a diagnosis of stricture should not prevent us from investigating the nervous phenomena, which will generally be present, and which the cure of stricture will not always alleviate.

With your kind permission, I will briefly mention two cases, which are rather typical, and for that reason will be of some interest in this connection:

CASE I — *Dec. 10, 1890.* A gentleman of more than ordinary intelligence, 42 years of age, a decided brunette, six feet tall and larger in proportion, whose former weight had been two hundred pounds, weighing at time of consultation one hundred and sixty pounds, pale and haggard in appearance; bowels constipated, never acting without the aid of medicine; frequent desire to urinate, with sore feeling at neck of bladder and soreness of the bowels; headache and constant aching in the back; weakness in the legs, with complete absence of patellar tendon reflex; could not stand long with feet together and eyes closed; his memory was poor; could not concentrate his attention upon his business, which was of a nature requiring constant thought and application; he was losing confidence in his business ability; was greatly depressed; had poor appetite and bad digestion, his food invariably giving him pain; insomnia was a marked feature in the case, the patient often spending whole nights without sleep; his thoughts were continuous-

ly of himself and his condition; he became very despondent, often threatening to put an end to his misery by suicide; claimed that voices at times whispered to him to cut his throat; he believed that he had cancer of the bowels, locomotor ataxia, and many other diseases of like character, and that he was becoming insane; when he would tell me of these things, I could easily explain away his fears; the hallucinations, delusions, and morbid impulses, he recognized as such.

There can be no doubt that this gentleman was in the border-land, and was saved by the restraining influence of his reason and will, which, at one time, appeared very shaky.

He had, in his early life, been "one of the boys," as he puts it; claims that he has masturbated but little; has been married more than fifteen years; has never had issue; but, in the fifteen years of married life, he states that he has not missed one night, except when he or his wife were sick, without having intercourse one or more times. The local symptoms in this case were weeping penis, emissions during defecation, and, in the absence of erections, sweating testicles, sweating hands, irritable urethra, it being impossible to pass a sound one inch without producing extreme prostration, which would last several hours.

CASE II.—This gentleman, a mechanic, 28 years of age, weight one hundred and forty pounds, six feet tall, and quite slender; a blonde; was married a little more than two years ago; shortly after marriage, he called on me complaining of spells of dizziness during the day, a twitching of the muscles of the extremities after retiring, which would come on just as he was dropping off to sleep and keep him awake, and when the twitchings would cease, he would be attacked by a palpitation of the heart, which rendered him quite miserable.

Upon inquiry, the fact was revealed that he had been having intercourse from one to three times every night since his marriage; he also used tobacco to excess; there was a history of moderate masturbation during youth.

I advised him to live apart from his wife, and quit the use of tobacco. He returned in about eighteen months, and stated that his former trouble had ceased upon the cessation of his excesses, and that during the interval his wife had given birth to a baby boy, which was now about one year old. Lately his excesses had been renewed, and his former symptoms had returned to an exaggerated degree,

and with them the impulse to kill his child. A knife or sharp instrument lying in sight would suggest the idea, and the morbid impulse would urge him to carry out the suggestion, and he would be forced to hurry away to keep from yielding.

This patient had no hallucinations, delusions, or illusions, but impulses closely approaching those of an insane character, but which were restrained by the power of the will, which at no time seems to have become impaired; in other words, he knew that there was something materially wrong, and came to me for relief.

These gentlemen were both instructed to leave off their excesses, and given plainly to understand what the results might be if they continued. They were treated by electricity. The last patient mentioned made a perfect recovery. The first one improved rapidly for a while; but when he could sleep, and suffered very little from pain, and could again attend to business, he stopped the treatment. I do not think that I could have made a complete cure in this case; the source was so continuous and the irritation so long standing that I fear organic changes had already begun probably in the lumbar region of the spinal cord.

The mental phenomena, I am satisfied, were functional, as they disappeared completely after a few treatments.

The second case was so quickly and easily impressed that organic changes could not take place before the functional derangement became so alarming as to demand attention.

Treatment.—In the judicious use or application of electricity, by virtue of its stimulant, tonic, and sedative properties, we possess, I believe, almost a panacea for the functional neuroses, and especially sexual neurasthenia.

It has certainly acted well in my hands, and I have very seldom found it at all necessary to give medicine when electricity was employed.

In conclusion, I beg to claim that sexual neurasthenia has taken a firm stand, and occupies a conspicuous place in the category of the functional neuroses; and when recognized and treated as sexual neurasthenia, even though the patient be almost lost, wandering in the border-land of insanity, he

may be often cured; that when left to itself, or improperly treated, the course is progressively downward, and too often to destruction; that electricity, by virtue of its moral influence, as well as other virtues already mentioned, is the best remedy that we at present possess for the cure of sexual neurasthenia.

2120 Pa. Avenue N. W.

ART. V.—Report of a Case of Cancerous Degeneration Occurring in a Fibroma of the Mammary Gland, with Remarks.*

By W. P. CARR, M. D., of Washington, D. C.

Miss D., white, single, æt. 22; father living; mother died of cancer of the stomach. Has always been rather delicate and nervous, and has suffered at times from irritable bladder.

Two years ago an abscess formed, without assignable cause, in her left breast. This abscess broke, discharged about a teacupful of pus, healed rapidly, and gave no further trouble, until about a year ago, when she began to have shooting pains in the breast. The breast began to enlarge, the pain increased, shooting down the left arm, and the arm became so weak as to be almost useless. She was a fine pianist, but was obliged to give up music on account of pain and paresis of the left arm. She is nervous, does not sleep well, has a poor appetite, and has lost flesh during the last two or three months. Present weight, 96 pounds. Former weight, 115 pounds. Examination showed her to be thin, with a greenish, yellow tint of skin and conjunctiva.

Right breast large and firm for her size and flesh. Left breast about a third larger, brawny and indurated. The induration extended above toward the axilla, and an inch below the gland in the axillary line.

A distinct, hard mass, fixed and immovable in the lower and outer part of the gland. Skin immovable over nearly the whole breast. Nipple very small, of a dark brownish, pink color, not retracted. Two enlarged glands in the axilla, one of them as large as a hickory nut.

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, held November 9th, 1891.

August 31st. Assisted by Drs. Sterling Ruffin and Wm. F. R. Phillips, I removed the entire breast, pectoral fascia and indurated tissue around the gland, and the axillary glands. As I thought it necessary to remove all the skin that was not freely movable, there was some difficulty in bringing together the edges of the wound. This was accomplished, however, by using relaxation sutures, and the wound healed rapidly without the formation of a drop of pus, and without constitutional disturbance.

The patient has been very much relieved by the operation. She now suffers no pain, her appetite has returned, and she has gained six pounds, and has good use of the arm.

Examination of the breast, after removal, showed the entire gland to be infiltrated with a growth of connective or fibrous tissue, and studded with hard, fibrous masses from the size of a pin head to that of a walnut. There was no evidence of a capsule.

I removed several pieces of the breast for microscopic examination, and have the slides prepared by Dr. Scott, of Columbia Hospital, and myself to show you to-night. Sections from a limited area in the central and softer part of the tumor are plainly scirrhus cancer. Sections from all other parts of the tumor show nothing but hyperplasia of the fibrous tissue, without any evidence of malignancy, and were at once pronounced simple fibroma.

I consider this a remarkable and interesting condition. Certainly malignant tumors usually present the microscopic characteristics of malignancy throughout the whole extent of the growth; if not at their inception, at least by the time that they have reached a sufficiently advanced stage to give clinical evidence of their nature.

I have never seen or heard of a cancer, which, when examined microscopically, did not show the typical alveolar structure, or other evidence of malignancy throughout its whole extent.

In this case, however, we have apparently, in the same tumor, two kinds of growth entirely distinct microscopically, and entirely distinct clinically. In other words, we have really two tumors, and we are forced to ask whether this is simply an accidental occurrence, or whether one growth stands in relation to the other as a

cause or predisposing cause. It is not a new idea that cancer may attack some pre-existing benign tumor. Indeed, it is a well known and undisputed fact that cancer not infrequently begins in a wart or mole that had existed for a long time, perhaps from birth, as an insignificant and apparently harmless tumor, and many writers have made the statement that cancerous degeneration is more likely to occur in fibrous or myomatous tumors than in normal tissues. Indeed, it seems probable that cancer never begins in really normal tissues, but only in those where retrograde metamorphosis has begun either as an atrophy, after the active period of an organ has past, or as an infiltration with embryonic cells from prolonged irritation, injuries, scars, benign neoplasms, etc.

I know of no statistics or careful observations bearing upon this subject, nor have I ever heard of a case where microscopic examination has demonstrated the presence of cancer apparently developing in a benign tumor, but there is abundant evidence to show that, clinically, benign growths may become clinically malignant.

In such cases it seems probable that the growth seems *de novo* malignant in the benign tumor, just as it might in an atrophic uterus. Such a condition would not usually be detected, at least until the malignant growth had permeated, or even spread beyond the original benign tumor, and we do not know how often it may occur.

I have recently seen several tumors removed from the uterus that would, I think, have thrown some light upon this subject, had they been subjected to careful microscopic examination. One of these, for example, removed at Columbia Hospital, post-mortem, was, as far as could be judged by naked eye appearances, partly myomatous, partly malignant, and partly bone.

(Dr. Bowe, who also saw this tumor, will, I think, agree with me in this statement.)

I do not wish to add to the numerous and groundless theories of the origin of cancer by pursuing this subject more in detail, but I think the most probable explanation

of my own case is, that a growth of fibrous tissue was started by the abscess, and that the fibroma was attacked by cancerous degeneration about a year later, at the time when pain and enlargement of the gland began. The irritation of the cancer most likely caused, at the same time, a further growth of the fibrous tissue.

After reviewing the subject, I think we may draw the following practical conclusions:

1. It is possible, and even probable, that carcinoma frequently originates in benign tumors.

2. As such growth is extremely liable to be overlooked in its early stages, careful microscopic examination of various parts of apparently benign tumors should be made, particularly when they have been removed from the breast or uterus. Now that it is becoming the common practice to remove uterine myomata, as well as all growths from the mammary gland, the opportunities for such examinations are abundant.

3. The possibility of cancerous degeneration should afford a strong indication for the early removal of apparently benign tumors, particularly when such tumors occur in the mammary gland.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

Clinical Reports.

A Case of Otitis Parasitica, Otorrhœa, Deafness, Artificial Drum-Membrane.*

By JAMES L. MINOR, M. D., of Memphis, Tenn.

I have selected this case of multiplicity of diseases, not on account of its novelty alone, but because in relating it, several important points in ear disease are emphasized; and, too, the case presents some features of special interest.

A synopsis of the case is as follows: *Disease of external ear from vegetable fungus (aspergillus)—cure; chronic inflammation of middle ear with persistent discharge (otorrhœal)—cure; deafness of eighteen years' duration relieved by artificial drum-membrane.*

Mr. ——— consulted me about his ears January 13th, 1888, and gave the following history: Aged 55 years, never heard well. In 1849, earaches, and following these, discharge from each ear, which continued until 1870, when it yielded to treatment, but left deafness so great, that only loudest tones of voice could be heard, and pencil and tablet had to be resorted to. This condition continued until 1880, when the hearing became worse and the discharge reappeared, and so remained until I saw him.

I found absolute deafness in the *right ear*, the drum being retracted, thickened, and scarred. In the left ear, only the loudest sounds could be heard; the auditory canal was inflamed and covered with a membranous material of a blackish color; there was a perforation about the size of a pin head near the centre of the drum, from which pus from a suppurating middle ear escaped; my treatment was confined to this ear. The ear was cleansed by syringing with a bichloride of mercury solution (1-5000), then dried with absorbent cotton, and tamponed with boric acid powder.

This procedure was repeated daily, at first, and then at longer intervals, over a period of about one month, at the end of which time, all inflammatory symptoms subsided. The hole in the drum remained, however, and the hearing was as bad as ever; hence I decided to try the effect of an artificial drum. I first used the little rubber disc, so often tried, and so rarely beneficial, and got no help from it. I

*Read before Tri-State Medical Association of Tennessee, Arkansas, and Mississippi, November 20th, 1891.

then extemporized an artificial drum by taking a bit of absorbent cotton and moulding it into a thin disc the size of the drum-membrane.

This was moistened with equal parts of glycerin and water, and applied to the drum of the ear. As soon as it was properly placed, there was an instant change in the facial expression of the patient, and he joyfully explained that he could hear, that the noises from the street sounded again after a silence of eighteen years; and I was asked to speak, that the human voice might be heard naturally again. I did speak, and found that he could hear and understand when I spoke in an ordinary tone a few feet from him, but that elevation of voice was necessary when I was further removed.

This patient has been under observation for nearly four years. He is still, to all intents and purposes, absolutely deaf, except when an artificial drum is worn, but with it in place, he hears well enough for all practical needs. The drum has to be changed every month or so. Occasionally the middle ear becomes inflamed, and the drum has to be removed while treatment for that affection is practiced.

The dark membranous material which came from the ear when treatment was begun, I examined microscopically, and found that it contained a certain form of vegetable mold (*aspergillus florescens*), which sometimes gives rise to a very obstinate form of inflammation of the external auditory canal. In this instance, it yielded to the treatment first instituted, and has not recurred.

Two Cases of Gunshot Wounds of Abdomen and Intestines—Treated by Laparotomy.*

By A. S. PRIDDY, M. D., of Keysville, Va.

CASE I.—*Gunshot Wound of Rectum, Vagina, and Urethra.*

On Saturday, 11th July, 1891, Lucy Tanner, colored, aged 10 years, was accidentally shot by her brother with an old-fashioned squirrel gun, charged with No. 6 shot, which he had pointed at her buttocks to frighten her. She received the charge between her anus and tip of coccyx; in fact, the

* Prepared for Medical Society of Virginia, but the author, not being able to attend, contributed it to the *Virginia Medical Monthly*.

tip was shot off, and the skin around the place of entrance was scorched, so near was she to the muzzle. The accident occurred about dark, and both Dr. F. J. Gregory of this place, and myself, were at once sent for. I was from home at the time, and did not see her till Monday morning. Dr. Gregory went, and did all that could be done to relieve her suffering by the administration of morphine, and prescribed a 1-1000 solution of bichloride of mercury, with which to wash out the wound. He said shock was not very marked, and it was not necessary to use much morphine to make her comfortable.

On Monday morning, 13th, we found her fairly comfortable, with a temperature of 102° , pulse 110, and marked tympanites, which indicated that peritonitis had set in beyond doubt.

On examination, we found a hole at the tip of coccyx, large enough to admit the passage of two or three fingers. The charge was found to have carried away the tip of the coccyx, burning the skin all around, and had passed through the rectum and vagina; and, cutting the urethra almost in two, had lodged above the symphysis pubis. The severity of the wound was evident.

We decided to perform a laparotomy. Having thoroughly cleansed the abdomen and navel with soap and water and a 5 per cent. solution of carbolic acid, we administered chloroform, and made an incision of six inches in the linea alba down to the peritoneum, which was badly wounded in several places; a part of the charge and wadding had lodged under the peritoneum just over the bladder. The peritoneum was now lifted up and opened on a groove director. Coil by coil the intestines were removed from the cavity and examined for wounds, but none were found except in the lower part of the rectum below the internal sphincter. The cavity contained a stinking serum. It and the intestines were flushed with a hot 1-2000 solution of bichloride of mercury. A carbolized rubber drainage-tube was passed through the wounded gut and external wound into the cavity. The intestines were returned, and the abdominal wound closed with six white silk ligatures and adhesive strip, and dressed with iodoform and absorbent cotton. She was now put in bed and hot rocks applied to her feet, and hypodermatics of whiskey administered, but she failed to re-act, and died about 6 o'clock that evening.

CASE II.—*Pistol-shot Wound of the Abdomen and Transverse Colon.*

On Friday night, August 7th, 1891, Henry Logan, color-

ed, aged about 30 years, was mistaken for an eaves-dropper, and shot by the doorkeeper of a True Reformers' Lodge at Mossingford, Va., about twelve miles from here.

The shooting was done at a distance of thirty yards with a 38-calibre Smith & Wesson pistol. The ball entered about two inches above and to the left of the umbilicus, and caused such little pain that he called to the doorkeeper to stop firing, tied his mule, and walked to the Lodge.

A wagon without springs was procured, on which he was carried home six miles distant over a rough road.

Dr. Donald McPhail, of Randolph, was called in to see him the next morning, and ordered warm applications to the abdomen and tincture of opium in 20 gtt. doses every 4 hours, to make him comfortable, and decided to await developments.

On Sunday morning, about 10 o'clock, I arrived in response to Dr. McPhail's summons. We found peritonitis just commencing, and readily agreed that a laparotomy was the only hope. Having stated the risk, small chances of recovery, etc., we proceeded to operate. After the administration of chloroform, and the usual toilet of the abdomen, an incision was made in the median line from above the umbilicus to the pubis down to the peritoneum, which was opened on a groove director. Up to this stage, the operation was uneventful. My hand, cleansed and carbolized, was now passed through the abdominal opening into the cavity, and carefully were the intestines withdrawn. It was soon found that the ball had travelled such a course among the reduplications of the transverse colon as to riddle it with six holes—one wound being so large and ragged as to require, in our opinion, an elliptical resection of about three-quarters of an inch long and one-quarter broad. All of the wounds were now closed with a continuous suture of carbolized gut after the Lembert manner; and after cleansing the cavity and intestines of fecal matter, serum, etc., by flushing first with a large quantity of hot water, and then bichloride solution 1-2000, the wounds of the intestines were packed with iodoform, and the intestines returned to the cavity. The abdominal opening was closed with six or eight large white silk sutures and adhesive strips, and dressed with iodoform and absorbent cotton. He was now put to bed, and in due time re-action came on fairly well. The operation lasted just fifty minutes, and most of the time was consumed in cleansing the cavity of the fecal extravasation, which was quite profuse. He was left in charge of

Dr. McPhail, who informs me that he died about 1 o'clock the next morning—just how, I have not learned.

Remarks.—I have published this paper, as its title implies, as a contribution to the statistics and literature of abdominal and intestinal surgery—for here we have had two cases of wounded abdominal viscera, two operations, and two deaths.

I would like to add to the above report that, speaking from an experience of four laparotomies for intestinal wounds, I find nothing to be so prompt in relieving shock and threatened collapse as flushing the cavity of the abdomen with large quantities of very hot water.

Proceedings of Societies, Boards, etc

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

LLEWELLYN ELIOT, M. D., 1106 P. St., N. W. Secretary.

Meeting of November 9th, 1891, Washington, D. C.

Dr. John F. Moran read a paper on

Placenta Prævia Marginalis—Complicated with Inertia Uteri.

The following is an abstract:

On May 18th, was engaged to attend Mrs. C., in her confinement, which she expected in a few days. She gave the following history: Age 23; married five years; three children and one miscarriage; all children living, and last was born April 4, 1890; labors natural; date of last menses and quickening unknown; has had her "sickness" twice within the past month, the last occurring about a week ago, while she was out marketing, and thinks she lost about a pint of blood.

Examination.—Uterus extends several inches above umbilicus. Placental bruit and foetal heart-sounds in the left inguinal region. Vaginal walls relaxed and cervix patulous, easily admitting index finger. Between the foetal head and the posterior lip of cervix, the edge of the placenta can readily be felt extending some distance beyond the edge of internal os. The examination fully confirmed

my suspicions of placenta prævia. As the case was within a few days of term, concluded to temporize, at the same time enjoining rest and quiet. I gave orders to be sent for at once should she have a return of the flow, also when labor would begin. Accordingly, was called about 4 A. M. of the 22nd inst., and learned upon my arrival, that she had been awakened two hours previously by the rupturing of the bag of waters, but had no pain. The cervix was found to be in about same condition as at previous examination. The water continued discharging throughout the day unattended with pain. About 9 P. M., she had several strong pains, which dilated the cervix about 2 inches in diameter. The contractions ceased, and the uterus again became rigid, and while the patient seemed to suffer very much, the pains had no effect upon the uterus. These few uterine contractions started a hæmorrhage, which was never at any time profuse. This condition continued unchanged for several hours, though I had endeavored to promote contractions by hypodermic injections of several minim doses of ergot and frequent vaginal douches of hot water. About 2 A. M., patient began to show signs of exhaustion; pulse became weak; mind began wandering; extremities cold. I then determined to deliver with forceps. Sent for Dr. Stafford; but, as the patient's condition was growing critical, proceeded, after having chloroformed the patient, to apply the forceps; and, when the head was brought below the superior strait, removed the instrument, and left the labor to terminate naturally, and head soon followed.

Immediately after the birth of the child, which was alive, I grasped the fundus uteri, and noticing that it was still unusually large, made firm pressure and expelled about a quart of dark clots, which evidently had been formed in the uterus for some time. About half an hour after the birth of the child, expressed the placenta, after which the uterus became relaxed, and a profuse hæmorrhage ensued. This was readily controlled by ergot and intra-uterine douche. The patient made an excellent recovery.

Dr. J. W. Boveé, in opening discussion, said that he thought the treatment pursued by Dr. Moran was proper, and that he had a case of placenta prævia marginalis. The first hæmorrhage was from the separation of the placenta in the neighborhood of the cervix; the second, from a point higher up. It cannot be told whether the bleeding was from the placenta or from the uterus itself. He would use ergot in small and repeated doses for the inertia, unless the

bag of waters had ruptured, to obtain its stimulating effects, but thinks podalic version preferable if the head is presenting. The effect of a dose of ten minims of fluid extract of ergot would last about ten minutes; it would act as a stimulant too, and not cause tonic contractions of the uterus. To obtain the tonic contractile effects of the drug, it must be given in larger doses.

Dr. Eliot said he had met with but one case of placenta prævia; it was marginalis, and occurred about three years ago. The woman was twenty two years of age and in her third confinement. Hæmorrhage had occurred on several occasions during her gestation, but had always yielded to treatment. A severe hæmorrhage occurred about three o'clock in the morning. Her physician reached her at four, and determined to terminate the labor. Dr. Eliot reached the patient about five. After administering ether the child was turned, and the forceps applied to the after-coming head. The woman was exhausted; ergot, atropia, and brandy were administered hypodermically and by the mouth; hot coffee was thrown into the rectum, and every possible means resorted to to strengthen her, but she died two hours after delivery. In this case, had premature labor been induced, it might have been better for both the mother and the child, for the child has a chance for its life in the sixth month. Preferred version, with rapid delivery by the feet. The tampon is misleading, in that it gives feeling of false security. Version with the tampon seems to increase the danger, and he thought the hæmorrhage could be controlled better after the child was delivered, as pressure, electricity, cold injections, and other measures could be applied to better advantage. Does not believe in the small doses of ergot given by Dr. Moran. When ergot is given, it should be given in large doses; for unless the hæmorrhage is stopped, the woman will die; so why use valuable time in temporizing? He would not give ergot until the child was delivered.

Dr. W. P. Carr said that the histories of the two cases were similar, and unless the patient was in a hospital under the immediate supervision of her medical attendant, he would discountenance temporizing. We can never tell whether the hæmorrhage will be slight or profuse, and for this very reason, anything that will afford a false security is wrong. He believes in version in the treatment of these cases. He has seen cases where the head has descended and arrested the hæmorrhage by acting as a tampon. The life of the child is not to be taken into consideration.

Dr. F. B. Bishop said that he saw a case about ten years ago in the country. He was without instruments or assistance. The finger could hardly pass in the cervix; after some hours he was, through persistent effort, able to introduce the hand and perform version. The hæmorrhage stopped when the feet were drawn down. After many complications she was delivered of a still-born child weighing fourteen-and-a-half pounds, and measuring twenty-five inches; the perineum was torn, but was stitched up at the time. He saw the patient ten days later, when he found her with a septic fever, comatose, bladder greatly distended, and he drew off an almost incredible amount of very offensive urine, washed out the bladder and left her in a better condition; phlegmasia dolens developed. Notwithstanding all these complications she recovered in time, and when last heard from she was working in the corn-field. Dr. Bovee speaks of the intermittent contractions of ergot; but how would he distinguish between those cases in which infinitesimal doses were applicable, and those in which they would fail? Ergot causes tonic contractions. The cervix may be dilated with Barnes' bags. He preferred rapid dilatation and immediate delivery.

Dr. J. V. Carraher thought temporizing was dangerous unless the physician was near. He had run the risk in several cases which were suspicious. They may not have been placenta prævia—he was not certain as to his diagnosis, although they had symptoms pointing that way. He would dilate and perform version did he have a case.

Dr. F. B. Bishop read a paper on—

Sexual Neurasthenia as it Stands in Relation to the Border-land of Insanity, and Insanity in General. [See page 752.]

Dr. W. P. Carr said that he had seen several cases of neurasthenia, and the stomach was nearly always at fault. He did not consider neurasthenia a disease, but a symptom of either diseases of the alimentary canal, or of the nervous system, in which electricity did good. Prostitutes, as a rule, are free from neurasthenia.

Dr. J. F. Moran said that cases of neurasthenia were more frequent in the higher class of society, where the nervous system was more highly developed.

Dr. J. W. Boveé considers neurasthenia symptomatic of serious organic lesions, and in the higher classes the primary disease may escape us. Electricity is the best agent we possess for its treatment. Chloride of gold and soda has

been highly recommended for it with varying success. He thought patients masturbated because they were insane, and were not insane because they masturbated.

Dr. F. B. Bishop said in closing, in answer to Dr. Carr, he would say the condition of the stomach was more apt to be symptomatic of neurasthenia than the neurasthenia produced by the condition of the stomach. We have stomach trouble in all forms of neurasthenia. In answer to Dr. Bovee, he would state, that neurasthenia was always, primarily, a functional disease. It is true we often have nervous exhaustion in severe organic lesion. The fact that people masturbated because they were insane places the whole race, to say the least, in a very precarious position. Masturbation, for the most part, is the result of habit formed at school, and learned from other boys.

Dr. W. P. Carr read a paper reporting

A Case of Cancerous Degeneration of a Fibroma of the Mammary Gland, etc. [See page 759.]

Dr. L. Eliot said that the paper of Dr. Carr opened the way for a discussion of the pathology of tumors in general, for which he did not feel equal. He thought the fibroid tumor was entirely independent of the carcinoma; that the gland had degenerated from the time of the primary abscess, and the entire removal of the gland and axillary lymphatics, was the only treatment he would advocate. Tumors may undergo changes—fatty degeneration, calcification, colloid or mucoid degeneration, ulceration and mortification. The microscope does not always decide the character of a growth. Some fibromata closely resemble sarcomata in their microscopic appearances.

Dr. J. W. Boveé did not think it had yet been conclusively proven that benign tumors undergo a carcinomatous degeneration. This subject had received considerable attention from gynæcologists; and not long ago it excited a spirited discussion, if he remembered aright, in the New York Obstetrical Society, and in the Philadelphia Obstetrical Society. He thought the consensus of opinion was against it. In his own mind there was reason to believe that such degeneration could occur. Witness the cancer of the face developing in a mole of twenty or thirty years existence. Then, too, Dr. Carr's specimen shows the constituent elements of cancer in the very centre of a fibroid.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

The Fourth Annual Session was held in the Rooms of the Young Men's Christian Association, in Richmond, Va., November 10th, 11th, and 12th, 1891. There was a very representative attendance of the surgeons and gynæcologists of the United States and Canada—especially Southerners. The President, Dr. L. S. McMurtry, of Louisville, Ky., presided with grace and dignity, being assisted at times by Vice-President, Dr. J. McF. Gaston, of Atlanta. The Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., to whose earnest interest and indefatigable labor the Association is more indebted than to any other member for its wonderful success, was also at his desk throughout the session.

The social features of the session consisted in a reception at Westmoreland Club on Tuesday night, tendered by the Resident Members of the Association; a reception on Wednesday night tendered by Dr. Hunter McGuire, at his house; a luncheon on Thursday, given by Dr. George Ross at his home, and a banquet given by the medical profession of the city on Thursday night at Murphy's Hotel, at which toasts were magnificently responded to by each of the speakers. It is not too much to add that these social events were each of the highest order and highly enjoyed.

The meetings were called to order each morning at 9 o'clock; adjourned at 1:30 P. M.; reconvened at 3 P. M., and continued uninterruptedly until about 6 or 6:30 P. M.

The membership of the Association is now limited to 150, and this maximum is now nearly reached. The Council is exercising much caution as to whom it elects to membership—thus making it a felt honor to be a member. The initiation fee or annual dues is \$10.

The papers read and discussions had on them during this session were all valuable and elicited the intensest interest.

Morning Session, November 10th.

Albuminuria—Its Relation to Surgical Operations

Was the subject of the first paper, read by Dr. J. W. Long, of Randleman, N. C., who stated that albuminuria always meant something wrong with the kidney; but this condition by itself is not a sure index as to the state of the kidneys. Tube casts, urea, and other products in the urine must be considered. Ether has no perceptible effects on healthy

or slightly diseased kidneys. Confirmatory cases were cited. He considers that there is some risk in using chloroform, which is usually thought to have little effect on these organs. He has lost two cases from chloroform. This agent is sometimes dangerous. Kidney troubles sometimes follow operations, especially those on the abdominal and urinary organs. Urethral fever is a reflex of the kidney condition. The albuminuria complicating contagious diseases is due to sepsis. Albuminuria at the time of an operation is dangerous, and it prevents the elimination of poisons. In some cases an operation is followed by cessation of albuminuria. The conclusions are as follows:

I. Ether or chloroform rarely injures healthy kidneys.

II. When renal disturbances occur from the use of an anæsthetic, the kidneys being healthy, they are due rather to prolonged narcosis, exposure of the patient, or perhaps to the combined influence of the operation and the anæsthetic.

III. A mild degree of albuminuria (or nephritis), especially if recent, is not a contra-indication to the use of chloroform.

IV. Even in the presence of advanced and extensive renal changes, an anæsthetic may be employed, provided the patient or the family be advised of the additional risk.

V. Of the two anæsthetics usually employed, it is yet a mooted question as to which is the safer, so far as the kidneys are concerned, unless it be in obstetrical operations.

VI. While it is by no means the rule, profound functional disturbance, and even organic lesions may be induced by an operation, apart from the influence of the anæsthetic.

VII. Such renal changes are due to reflex sympathetic action, or to sepsis, or both.

VIII. Operations in certain regions—notably, the abdominal, genito-urinary, anal, or rectal, are especially liable to produce renal complications.

IX. A healthy condition of the kidney *minimizes*, but does not obviate the danger referred to.

X. Albuminuria is always an indication of renal lesions, and should be regarded with distrust, but is not a positive contra-indication to an operation.

XI. When albuminuria is associated with other evidences of advanced renal changes, no operation should be undertaken without candidly stating to the patient or friends the dangers incident to the condition of the kidneys.

XII. Paradoxical as it may seem, an operation will sometimes relieve an albuminuria due to acute affections.

XIII. No surgeon is justified in undertaking an operation without first knowing the state of the patient's kidneys.

In opening discussion on the paper, Dr. W. W. Potter, of Buffalo, N. Y., lays great stress upon anæsthetics; has used both ether and chloroform. Healthy subjects take chloroform well. Its exhibition in military cases is well borne. In 3000 cases where chloroform was used, he has had no death. It is highly important that the anæsthetist be an experienced man, and that a minimum of the anæsthetic be given.

Dr. Baxter, of Chattanooga, Tenn., sees a great deal of surgery in machine shops. Shock is generally great, and it is hard to determine the effect of the anæsthetic upon the kidney. He has seen suppression of urine when no anæsthetic was used, and therefore attributes the condition to shock. He always has a careful anæsthetist, and hence he uses ether rarely.

Dr. J. S. D. Davis, of Birmingham, Ala., thinks that anæsthetics at times produce suppression of urine. In anæsthetizing dogs for surgical experimentation, he has frequently seen suppression of urine result. He believes chloroform the proper anæsthetic, but considers it very important to have a trusted anæsthetist. Albuminuria alone is not a surgical contra-indication. He operates whether this be present or not.

Dr. Hunter McGuire, of Richmond, Va., thought that Dr. Long had not proven that chloroform produces albuminuria, which sometimes follows without an anæsthetic. In cases where the catheter was used with chloroform, he thought the instrument did more harm than the anæsthetic. In answer to the statistics given by Dr. Potter, showing that the rate of mortality with ether is 1 to 90,000, and with chloroform 1 to 3,000, he replied that there are no records for such a statement. He believes that chloroform, generally speaking, is the safer agent, but judgment is required in the selection of the anæsthetic for individual cases.

Dr. W. F. Westmoreland, of Atlanta, Ga., thought that there had been a good deal of hair-splitting on the subject of selection of the anæsthetic. Albumen, in whatever quantity, means nothing by itself. Casts, or other evidences of disease, must be found. Albuminuria may be due to a spree, to an excess of albuminous food, or to other causes. In such cases, no bad results would follow an operation. In accidents, we must operate, no matter what the condition of

the kidney is. Certain post mortem evidences of alleged disease may not count for much. Let that anæsthetic be used with which the surgeon is most familiar. He has one anæsthetist, in order to avoid the worry caused by those to whom he is not accustomed.

Dr. C. Kollock, of Cheraw, S. C., has used chloroform 10,000 times without a death, and ether 200 times with two deaths. He always gives brandy before starting the use of chloroform. He believes there is more danger with chloroform than with ether if it be carelessly administered; and therefore uses the anæsthetic which is indicated in the special case.

Dr. Joseph Price, of Philadelphia, spoke of the safety of chloroform in puerperal eclampsia. He does not think that chloroform causes kidney disease. The trouble with chloroform is that it kills so quickly, thereby making it hard to say whether the anæsthetic or the operation is the cause of death. Many of the cases of death from anæsthesia die from prolonged use of the anæsthetic. He hasn't had scanty urine follow anæsthesia except in special instances. Some who die several hours after an operation are killed by chronic surgery.

Dr. A. Vander Veer, of Albany, N. Y., cited a case of collapse following chloroform. An autopsy revealed multiple abscesses in the kidneys. The condition known as "surgical kidney" is important. He does not think that chloroform causes albuminuria. Has not seen a death from ether, but has seen it from chloroform. Some back pathological condition is often the cause of death. A judicious choice of anæsthetics must be made. Chloroform is unquestionably safer where there is renal disease. He thinks each surgeon should have a special anæsthetist. Before administering an anæsthetic, he gives $\frac{1}{150}$ th grain of atropine and $\frac{1}{6}$ th grain of morphine. Under ordinary circumstances he prefers ether—considering it safer than chloroform. However, he thinks chloroform preferable for children, etc.

Dr. H. P. C. Wilson, of Baltimore, has given chloroform ever since its introduction, about thirty years ago, and yet without a death. However, deaths do occur from chloroform, ether, and from their combinations. He lays stress on the reliability of the anæsthetist. In from 10,000 to 15,000 cases where chloroform was used, there was no ill effect. He spoke of the safety of chloroform as used in England. Yet certain parties in the United States have raised such a hue and cry against chloroform as to make

people look upon death from chloroform as all wrong, while from ether as all right.

Dr. W. H. H. Cobb, of Goldsboro, N. C., lays stress on the manner of giving anæsthetics. He gives whiskey, or morphine and atropia, beforehand, and watches the respiration more than he does the pulse.

Dr. Morton Douglas, of Nashville, Tenn., for general surgical purposes, prefers chloroform. He mentioned a case of ovarian cyst in which renal disease was present. Chloroform was given; absolute suppression of urine and death followed the operation. He examines the urine in all cases of fibroids, and almost invariably finds albuminuria. This condition, therefore, by itself, is no contra-indication to an operation. Other evidence of grave renal disease must be obtained before we decide positively on an operation.

Dr. H. O. Marcy, of Boston, Mass., referred to the inhibitory functions, the state of the skin, and other points which are to be considered in connection with the question of the selection of the anæsthetics. He spoke of the fact that chloroform gives little or no warning when it kills, and remarked that ether has been carelessly handled and pushed too far on account of the belief in its safety.

Dr. Long, in closing the discussion, said that the danger to the kidney in surgical cases of abdominal diseases had been much overlooked. Dr. Potter had sounded the keynote in referring to the necessity of making a judicious choice of anæsthetics. Drs. Baxter and McGuire made a good point in saying that albuminuria was often caused by shock. We must not forget that we can operate with much less risk of renal complications on other portions of the body than on the abdomen and genito-urinary tract. We never have a permanent albuminuria without renal disease. While functional albuminuria may exist, it should be remembered that if it remains unrelieved too long, it will cause organic lesions.

Remarks on Systemic Infection from Gonorrhœa.

Dr. Bedford Brown, of Alexandria, Va., in his paper cites five case of systemic infection from gonorrhœa. He believes that there are two channels for the absorption and transmission of the gonorrhœal microbe into the general system. One is by continuity of surface over the mucous membrane of the genito-urinary tract from the urethra to the kidney. The other channel is through the medium of the great lymphatic system from the lymphatics of the ure-

thra to the inguinal glands; thence through the lymphatics of the system into the general circulation, though in a great majority of cases it does not extend further than the prostate or the inguinal glands. He believes also, that this microbe so transmitted, is lodged at different points in the organism. The gonorrhœal microbe, transmitted by continuity of surface over the genito-urinary tract, invariably induces specific suppurative inflammation. On the contrary, when absorbed through the lymphatics, the inflammation is not of a suppurative character, but assumes peculiar types. Thus the contact of the infectious microbe with the mucous surfaces produces suppurative prostatitis, cystitis, ureteritis, pyelitis, then pyonephrosis. The absorption of the same through the lymphatic channels first sets up lymphangitis of the urethra, then lymphadenitis of Cowper's glands, then of the inguinal glands, then inflammation of the connecting lymphatics. Then, by further absorption, it induces septic phlebitis of the thigh, and finally synovitis and endocarditis and destructive ophthalmitis of the internal structures of the eye. He believes also that in certain cases genuine septicæmia may be developed in the course of these complications. He thinks that there is a marked relative difference in the susceptibility of different constitutions to the systemic poisoning of gonorrhœal infection. That the absorption and infection of the system from this cause is only in exceptional cases. The writer lays stress on gonorrhœal ureteritis following cystitis as a part of the action of the gonorrhœal infection in its travels over the mucous surface of the genito-urinary tract towards its final destination—the kidneys. This complication is accompanied with pain, at times sharp and paroxysmal, but usually dull and aching in character. These sharp paroxysms of pain extend upwards towards the kidney, and not down towards the bladder as in nephritic colic. Then, again, there is soreness in the entire line of the ureters, increased on pressure, so that the course of the ureter may be clearly marked out. Ureteritis always is established before nephritis begins in gonorrhœal infection. The cases cited by Dr. Bedford Brown indicate that a state of septicæmia may be developed by systemic infection in gonorrhœa in certain cases. Thus he has seen septic infections, gonorrhœal prostatitis, cystitis, endocarditis, pyonephrosis, lymphangitis and phlebitis.

CASE I.—A young man, aged 23, contracted gonorrhœa when in perfect health. At the second week a decided chill and fever ushered in acute prostatitis, then cystitis and

ureteritis, and pyelitis and pyonephrosis of the left kidney, with constant throbbing pain over the region of the organ. Finally a large quantity of genuine pus appeared in the urine, which continued in the daily evacuation of urine for three weeks or more. The urine under the microscope, inspected daily during all the suppurative stage, showed beautiful and perfect specimens of malpighian bodies and uriferous tubules, some perfect, in part, some indicating that the kidney was undergoing disintegration by suppuration and abscess. Under a milk diet, bicarbonate and phosphate of soda, quinine, and finally tincture of iron, the suppuration ceased, the pyæmic fever subsided, and the man recovered with the loss of a kidney and a closed ureter, but with fair general health.

CASE II.—A young married woman, age about 25, soon after marriage contracted gonorrhœa from her husband. At the time, she was in perfect health. The gonorrhœal infection extended from the urethra to the bladder, causing cystitis, then urethritis, and finally nephritis. The urine contained a large proportion of albumin and tubular casts. Both ureters and kidneys were involved. These infectious complications were accompanied with great constitutional disturbance, as chills, fevers, and perspiration and general depression. There was continued fever, delirium, increasing stupor, then coma, finally convulsions and death. The most energetic treatment, as the eliminatory, sudorific, cathartic, availed nothing. There were all the symptoms of septicæmia present in the case indicated by the chills, fever, perspiration, adynamia, dry tongue, delirium, and finally uræmic coma. The history of this case, he thinks, suggests the thought that gonorrhœal infection may be more frequently the cause of acute and chronic nephritis than is usually supposed.

CASE III.—The subject of this case, which he reports of an exceedingly interesting and complicated character, was a young man, aged 27, of perfectly healthy constitution previous to the attack. About the tenth or twelfth day of the gonorrhœa, there set in symptoms of severe prostatitis, attended with most extreme pain and suffering, and frequent desire to urinate. At each attempt to urinate, the agony in the rectum and bladder, exceeded anything of the kind in his experience. Then followed very speedily retention of urine. To insert a catheter, even under chloroform, was found impracticable. He was finally relieved by repeated douches of hot water injected into the urethra up to the

prostate, and by maintaining the urine in a neutral state by means of a half ounce of bicarbonate of potash dissolved in a solution of citrate of potash every twenty-four hours. These measures relieved engorgement and enabled the patient to evacuate the bladder. Then a prolonged rigor and high fever ushered in a genuine attack of gonorrhœal cystitis, accompanied with discharge of blood and mucus. The urine now became alkaline, and deposited large quantities of triple phosphates and ammonia. Peroxide of hydrogen was thrown into the bladder in dilute form as an antiseptic. The patient took from twenty to thirty grains of pure benzoic acid in capsules per day. Under this treatment the attack of cystitis gradually subsided. Then ureteritis on both sides was developed, denoted by pain and tenderness over the course of the ureters; then desquamative nephritis followed by extension of infection, or rather pyelitis and then nephritis, accompanied with a very constant and harassing pain over the lumbar region. For the first time albumin now appeared in the urine. Under the free use of benzoic acid, three grains in capsules every two hours, five grains of salol every three hours, and fifteen grains of iodide of potash three times daily, the ureteritis, pyelitis and nephritis were finally subdued, and the patient, after a confinement of some two months, was supposed to be restored.

But just at this time there was a slight return of urethritis after its entire disappearance. Then lymphangitis appeared in the lymphatic vessels of the corpus spongiosum in the form of red lines; then inflammation of Cowper's glands, which could be felt large and tender through the rectum; then, in rapid succession, lymphadenitis of the inguinal glands, and lymphangitis of the connecting lymphatic vessels of the abdomen and thigh, manifested by the development of numerous red lines in the course of these vessels. Between these red lines there appeared patches of erysipelatous inflammation. The type of fever now assumed a decided septic form. These complications were treated locally by means of an ointment composed of ichthyol, iodoform, and iodine, one drachm each and lanoline and vaseline of each one ounce, applied over the entire diseased surface, covered with cotton twice daily; internally, thirty grains of quinine per day and one grain of sulphide of calcium every three hours.

In two or three weeks the local affection subsided entirely without suppuration. But another chill and high fever

ushered in phlebitis of the superficial veins of the thigh and leg on the same side. The veins became swollen, corded, and painful. This complication was treated with the same ointment, and internally quinine in large doses, and the tincture of the chloride of iron, with ultimate success, except some varicose veins.

Following this attack, a violent attack of gonorrhœal synovitis was developed in the hip-joints, knees, and ankles. The salicylates and alkalies exerted no influence whatever.

It was finally subdued by five-grain doses of each salol and phenacetine, and large doses of iodide of potash.

This case, after four months' confinement, concluded with an attack of double orchitis. According to his usual method, this was treated by twenty grains of bromide of potash, and five of the iodide every three hours, until brominism, when the local affection rapidly subsided. After passing through this series of extraordinary complications, the health of the patient was almost wrecked.

CASE IV.—Male, aged 45. From an attack of ordinary gonorrhœa prostatitis ensued, with retention of urine. The urine was alkaline, but contained neither albumin nor casts. Symptoms of true septicæmia appeared, consisting of chills, fever, and perspirations, dry tongue, nausea, delirium, and stupor. Then muttering delirium, and, finally, profound coma and death.

CASE V.—Male, aged 18. He contracted gonorrhœa; and in the third week a very severe attack of gonorrhœal synovitis appeared in the joints of the arms and legs. Then septic endocarditis appeared, ushered in by chills and high fever of an adynamic or typhoid type, all indicating septicæmia. The salicylates, alkalies, and iodides, exerted no influence over its progress, but the acute symptoms, after a tedious course, gradually subsided. Then a sudden and most agonizing pain attacked the globe of the left eye without conjunctivitis. The vision was impaired from the beginning, and there was distension of the globe with throbbing pain. Finally, the anterior chamber became clouded, the cornea was ruptured, a quantity of pus escaped, and blindness in that eye ensued.

This case is cited as an example of septic poisoning from gonorrhœal infection, and of its rapid transmission through the system. The writer is impressed with the conviction that gonorrhœal synovitis and endocarditis have no analogy to true rheumatism; that the gonorrhœal microbe, when once absorbed into the general system through the channel

of the lymphatic system, assumes the character of a septic poison, and, when lodged in the tissues, is capable of arresting the process of nutrition in the part, of disturbing the process of metabolism, and establishing local inflammations of a peculiar type and progress. Most fortunately, it is only in rare instances that the systemic absorption occurs in the progress of ordinary gonorrhœa.

In discussing the paper, Dr. Robert T. Morris, of New York, thinks we have no definite information as to the constitutional effects produced by gonococci; and yet it is certain that the conditions described by Dr. Brown as following gonorrhœa do occur very frequently. He does not believe that it is the gonococcus of Neisser which directly causes the suppurative results spoken of, but most probably the presence of these gonococci give rise to other cocci which do have such effect—gonorrhœal septicæmia. If we cure the posterior urethritis in cases of gonorrhœa, much trouble is prevented. Peroxide of hydrogen, in full strength, is an excellent agent to apply to the diseased posterior urethritis when acute symptoms have subsided.

Dr. Joseph Price, of Philadelphia, agreeing with Dr. Brown, considered gonorrhœa a dangerous disease. He referred to a death in Dr. Agnew's practice from prostatic abscess following gonorrhœa, and recalled three deaths that he had known to occur among medical students. He has operated on more than one hundred women, wives of men whom he had treated for gonorrhœa in previous years while he was at the old Philadelphia Dispensary. His treatment of pelvic trouble of late, has been in proportion to his treatment of gonorrhœa in former years. It is better for a community that a man with uncured venereal disease—gonorrhœa especially—should be locked up than a professional murderer; for the latter kills only a few in a lifetime, whereas the gonorrhœal subjects kill many innocent wives in a community. It is reprehensible that the drug-shops should undertake to treat such diseases. It is a well-known fact that most drug-shops are now-a-day little less than "clap traps."

Dr. Baxter, of Chattanooga, Tenn., takes exception to Dr. Brown's perfectly satisfactory treatment of gonorrhœa. The mild cases are largely treated in drugstores, while the majority of the severe cases are often only seemingly cured. Hence so many wives subsequently suffer from pus tubes and other pelvic troubles. He does not believe that organic stricture can be cured by drugs.

Dr. A. Vander Veer, of Albany, N. Y., said that a practical point was to know when a man could safely marry after having had gonorrhœa. If he found pus, or any evidence of irritation, after a careful examination of the urine, he always discountenanced marriage.

Dr. J. S. D. Davis, of Birmingham, Ala., will not treat gonorrhœa unless the patient consents to go to bed. He cited two cases in which epicystotomy was done for the relief of bladder symptoms of gonorrhœa, which, if let alone, would surely have affected the kidneys. In the first case the urethra was washed out every three hours, the discharge ceasing in ten days. The second case—gonorrhœal rheumatism—was relieved. He asked Dr. Brown did he prevent systemic infection?

Dr. Brown, in closing, stated that he had offered no method of treatment of acute gonorrhœa. The cases cited had not come under his care early, and were given merely as examples of systemic infection by gonorrhœa to be placed on record. The treatment, as lined out in his paper, was directed only to complications. He is sure constitutional treatment will sometimes have an influence in curing stricture. He referred to his former preceptor, Dr. Douglass, of Louisville, who was successful in this direction. He mentioned a case of bad stricture, bleeding copiously when touched, which yielded to medicines and dieting. He also related a case of typhoid fever in a patient with stricture, which was cured when the fever left.

Dr. J. Edwin Michael, of Baltimore, Md., read

A Report of some Additional Cases of External Perineal Urethrotomy Without a Guide.

The histories of eight new cases were added to the author's list, making seventeen in all. He deems the operation one of great value in gonorrhœal and traumatic urethral stricture. No death sooner than six months after the date of his operation has occurred, and when occurring, it was not due to the operation. He has less fear of danger now than before, but renal disease adds to the danger. He attributes his satisfactory results to his close adherence to aseptic practice—cleanliness, free incision and thorough drainage. His habit is to cut directly through the perineum down to the urethra, and usually enters it posterior to the stricture and cuts the stricture.

Dr. Hunter McGuire spoke of a case of urethral trouble in which supra-pubic cystotomy was done. To his surprise

he found that he could carry a bougie from the bladder out to the other end of the urethra. He has not for years punctured a bladder through the perineum, but does a suprapubic operation, which is simpler, safer, and surer of curing the patient.

Dr. Joseph Price criticised puncture of the bladder as uncertain and unsafe, and is surprised to hear Dr. J. S. D. Davis recommend aspiration.

Dr. Wm. E. B. Davis opposes puncture, as a rule, but advises it in such cases as extreme old age with prostatic hypertrophy and retention of urine. The objection to the use of aspiration is not so much the harm that might result from puncture, but the failure in arriving at a correct diagnosis by such a method.

Dr. J. S. D. Davis referred to a case where the bladder could not be entered in the ordinary way, but where Dr. McGuire's procedure might avail. He has advised aspiration only in such cases as his brother mentioned.

Dr. Baxter thought that cocaine might be used before the urethra is entered with the instrument.

Dr. C. Kollock recommends puncture under some conditions, and cited a case of spasmodic contraction of urethra relieved in this way. In another case his son has used the aspirator probably twenty times.

Dr. J. W. Long considers puncture admissible at times. Perineal section is often required. He referred to a case of section without a guide, in which Dr. Michael's method was followed. Recovery.

Dr. Michael, in closing, remarked that there was too much opposition to puncture of the bladder. A man who has been on a spree, and has a congested urethra, can be at once relieved by antiseptic tapping. He considers the operation a very slight procedure, has done it hundreds of times, never has had a bad result, and does not see why any surgeon should object to doing it in the class of cases to which he has alluded.

The first paper, during the Afternoon Session, was on

Reduction of Dislocations by Manipulation.

Dr. W. F. Westmoreland, of Atlanta, Ga., was the author of this paper. He first referred to the hyoid bone, which, when dislocated, was put into position by having the head thrown backward and pressure made on the bone. He finds only six cases of this kind recorded—five by Englishmen and one by a South Carolinian. It occurs more fre-

quently, he thinks, than the diagnoses made of it. He spoke principally of the sub-coracoid dislocation of the shoulder—the most frequent of all shoulder dislocations. Many so-called sub-glenoid displacements are sub-coracoid. Reduction is accomplished by a method already known. Flex the fore-arm on the arm; rotate outwards, pressing the elbow to the side; rotate to a right angle, when, with a click, the bone slips into position. Carry the arm across the chest and apply a bandage. The patient must be placed on his back on a hard surface. This is important. Sometimes the elbow has to be lifted. Occasionally the bone is caught between the muscles. The same measures, with slight circumduction, will suffice. Invariable success has attended this method, even three or four weeks after the dislocation occurred. Any forward dislocation can be reduced in the same way, provided the coraco-humeral ligament is not ruptured. This must be put upon a stretch before reduction can be accomplished.

Dr. Bedford Brown gave his method, which applies to all varieties of dislocations of the shoulder. Place the subject on a wooden-bottom chair, with a man on each side to steady him. Place the knee under the shoulder. When sufficient extension upwards and outwards has been made, press the arm over the knee. He has reduced twenty-odd cases in this way.

Dr. Westmoreland, in closing, gave the credit of his method to Drs. Bigelow, of Boston, and Gunn, of Chicago. Dr. Kocher's idea was not original. Dr. Brown's method is Dr. Cooper's. The objection to all other methods—even to Smith's, of Philadelphia—is that laceration may occur, or some harm may be done to the muscles and capsules of the joint. The point is to use as little force as possible.

Complications in Pelvic Surgery, and How to Deal with Them,

Was the title of the next paper, by Dr. Joseph Price, of Philadelphia. He first exhibited a specimen of removed abscess of the ovary, the tumor reaching to a high level in the pelvis, and not being an ordinary cystoma. He also presented a specimen of an ectopic pregnancy—the fifty-ninth operation he had performed for this trouble. This would have been called by many a peri-uterine hæmatocele, of which he has no knowledge. In these cases, the foetus is often lost, but may be found after two or three washings. He called attention to the fact that the operation for ectopic pregnancy was done first by William Bain-

ham, of Virginia, and that McDowell was probably influenced by Bainham.

The writer spoke of anæsthesia, shock, hæmorrhage, adhesions, and unforeseen elements in surgical operations. Numerous cases of fibroids of the uterus were illustrated with plates. The appendages may have to be removed when these exist. As a rule, it is a simple procedure, but hysterectomy may be necessary. Adhesions are the bane of pelvic surgery, and the complications are far greater than in abdominal work. When adhesions and the tissues present a conglomerate mass, we cannot use either knife or scissors. The fingers and nails have to serve us. No violence can be indulged. A place of cleavage must be found. The tactile sense is important. After breaking up such adhesions, styptics and ligatures do not suffice. Use water as hot as possible. Irrigation is not dangerous. If the case be desperate, flushing is needed. Packing with sponges and gauze is of great value; these can remain from sixty to seventy-two hours. Drainage-tube controls hæmorrhage, as the bleeding is more apt to stop in a dry cavity. The writer uses the tube almost invariably when adhesions exist; he does not like wick. If intestinal adhesions exist, the finest possible silk must be used in ligaturing. Leave no holes in the omentum, and pay special attention to bringing it, after the operation, into its proper anatomical relations. Re-operation is the worst thing to contemplate, the result being often bad. The author's plea is for exact, absolute, painstaking work.

Dr. J. T. Wilson, of Sherman, Texas, stated that complications were present in nearly all cases of pelvic surgery. The sooner the operation the better. He does not favor the strong antiseptic solutions, nor operating per vaginam; and does not favor the drainage-tube in every case.

Dr. H. O. Marcy, of Boston, Mass., said that we rarely have blood in the pelvic cavity which cannot be traced to other sources than true hæmatocele. He had seen a case presenting all the evidences of intra-pelvic hæmorrhage. Impregnation was suspected. The abdomen was opened, and the tumor found to be extra-abdominal. The opening was closed. Several pints of blood were removed through the vagina. He gave a diagnosis in another case of monocyst of the broad ligament. A surgeon was said to have removed some fluid by aspiration. Adhesions were found, and also an abscess at the point of puncture. A hysterectomy was done, with cure. Drainage-tube should be used

only when infection of some kind is suspected, or where fluids have to be removed. Disease germs can pass through the tube to the wounded abdominal cavity as well as out.

Dr. G. R. Dean, of Spartanburg, S. C., thought that surgeons are very apt to find what they do not expect. He referred to several instances of operations abandoned on account of unexpected revelations; has seen the bowel and bladder cut, the resulting recovery being due to the surgeon's readiness for any emergency. He preferred gauze for packing; advised drainage in extensive enucleations; disapproved of punctures, and mentioned a case where he injured a large vein by tapping an abdominal cyst. The profuse hæmorrhage was controlled by prompt ligaturing.

Dr. C. Kollock mentioned the case of an opium-eater where adhesions existed as the result of pus tubes without known pre-existent cellulitis. She had been tapped a number of times. Nothing could be done.

Dr. Joseph Price had seen similar cases. In fact, he had never been able to find cellulitis in cases of pyosalpinx.

Dr. A. Vander Veer believes, with Dr. Price, that a distinction should be made between the pelvic and the abdominal surgeon. Adhesions involving pelvic veins are the worst. Gauze is better than sponge. The drainage-tube is a good danger signal; it allows to get early information as to hæmorrhage. He has used the syringe in only two cases, but was not impressed by it. Gauze can be inserted into the tubes. It is very important to manage well exposed, lacerated, or strangulated tissues. Re-arrange the mesentery, by all means, and put everything in its proper place. It does not do to drain per vaginam. A case was cited where he could find no landmark. A pus sac was found on the right side. Recovery followed the operation.

Dr. J. Edwin Michael has had a recent case of laparotomy. Much flushing was necessary—boiled water being used. All the blood-clots could not be removed. A drainage-tube was inserted. Recovery. He removed an ovarian cyst not long ago without drainage, which ought to be used discriminately. It is best not to employ a drainage-tube if it be possible to do without it. A case was referred to in which he punctured the vaginal wall for a mass filling the pelvis. A trocar was introduced. Nearly a pint of pus escaped. The patient has done well so far. Blood-clots and other objectionable features would have resulted from abdominal section.

Dr. Joseph Taber Johnson, of Washington, D. C., has a

case in which there is a mass, firm as a brick, in the pelvis, with successive swelling of both legs. Wants to know whether Dr. Price would operate at once.

Dr. J. Price referred, in conclusion, to the many cases which he disliked to operate upon. He gives the rule to first save the patient. Too many patients are lost on account of too much surgery. If any accident occurs in pelvic surgery, correct it at once. A healthy peritoneal cavity will digest a small beef-steak. His patients who have drainage have cleaner tongues and better pulses. Delicate shades of difference must be drawn in various methods if we are to arrive at accuracy.

Referring to Dr. Kollock, he stated that that surgeon had done the best work in America—forty-nine cases and two deaths.

In Dr. Johnson's case, the tumor ought to be removed.

In reply to a question by Dr. Nash, he said that he commences with a 2 to 2½ inch incision and extends it if necessary. Most pus accumulations can be removed through a 2½ inch incision. Ovarian abscess is common if tube is attached to the ovary.

Laparotomies Performed During the Past Year

Was the title of a paper read by Dr. Thomas Opie, of Baltimore, Md. This was a report of thirty-two abdominal sections made by him in the twelve months beginning November 1st, 1890. They were for ovarian tumors, 6 cases; chronic ovaritis, 7; fibromata, 4; pyosalpinx, 5; retroflexion with adhesions and dysmenorrhœa, 3; exploratory incisions, 3; extra-uterine pregnancy, 1; abscess of ovary, 1; cyst of broad ligament, 1; and cystic degeneration of ovary, 1. The four deaths were in oöphorectomy for pyosalpinx, 1; for acute mania, 1; shock from ovariectomy, 1; and abdominal hysterectomy for fibro-cystic tumor, 1. Drainage was resorted to in but 3 cases, which he is convinced, did more harm than good. He even thinks that too much "flushing" is done, as it is but seldom called for. A plentiful supply of fine, properly prepared elephant-ear sponges will do away with flushing in most cases. As he believes drainage is doing more harm than good, he thinks it ought to be abandoned by abdominal surgeons.

Dr. Joseph Taber Johnson, of Washington, D. C., said he was not ready to give up the drainage-tube after laparotomies. Nothing is suggested to take its place. He also prefers flushing out the abdomen rather than depend on sponging.

Dr. W. E. B. Davis, of Birmingham, Ala., cannot do without the drainage-tube. He believes, however, it is too often left in too long—12 to 15 hours being usually long enough.

Dr. H. P. C. Wilson, of Baltimore, Md., has treated many women for gonorrhœa, and yet has never seen a case of pyosalpinx follow. He has cured several cases of mental trouble, however, by removing the uterine appendages.

Dr. Price has often seen girls and women restored to health, etc., after pelvic operation—parties who were previously on the border line of mania, having convulsions during menstruation, etc.

Ovarian Cysts, with the Report of a Case of Ovariectomy in a Young Girl.

Dr. C. Kollock, of Cheraw, S. C., was the author of this paper. Cases were cited to show the amount of disease that might exist in healthy-looking women, the importance of operation, and the difficulty of arriving at a clear diagnosis beforehand.

Morning Session, November 11th.

A Medico-Legal Aspect to Pelvic Inflammation

Was the title of the first paper, read by Dr. W. W. Potter, of Buffalo, N. Y. He said that pelvic inflammations in women had been discussed from almost every point of view, excepting the one he had chosen. He based his paper on the following case: A young married woman, pregnant, fell into a shallow street excavation, was immediately helped out, and walked home. In about a fortnight she suffered pain, and a physician diagnosed general peritonitis; she had several recurrent attacks. About three months after the fall, she was delivered by forceps of a still-born child. A few weeks later she was seized with pain in the right hip-joint, which was finally diagnosed and treated as coxitis. The right extremity was kept in an extension splint for two or three months, when she was declared cured. A suit for damages was entered against the city and paving contractors, and several experts were invited, by the counsel on both sides, to examine the patient. The prosecution held that the woman's suffering was due entirely to the alleged fall, while the defense held that her condition was due to circumstances entirely independent of any injury; that she had suffered from recurrent pelvic inflammation, that there was no hip-joint disease and never had been, and that she was not entitled to damages on that ground. A verdict was

given in about one-half the amount claimed, which was appealed. Dr. Porter, in testifying, called attention to the fact that reflexes pertaining to disease of the pelvic organs were very common, and especially were they prone to manifest themselves in the larger joints, notably the hip and knee. This might reasonably be expected when the intimate nerve communication between the pelvic organs and hip-joint was recalled. These reflexes had often been treated instead of the disease itself, and had been called neuralgia, rheumatism, and various other names. He cited a paper by Dr. R. H. Sayre, in which he referred to the fact that many such cases had been treated for genuine Pott's disease, with corsets and braces, that were afterward ascertained to be due to disease of the pelvic organs, with spinal reflexes simulating Pott's disease. The points he emphasized were:

1. The intimate anatomical relations between the pelvic organs and the larger joints—especially the hip and knee-joints—render them liable to reflexes.

2. The importance of careful primary diagnosis, lest grave errors and possible disastrous consequences result from misdirected treatment.

3. The medico-legal bearing that errors of judgment in diagnosis and treatment may have in relation to the patient, as well as upon the reputation of the physician.

In opening the discussion, Dr. Chas. A. L. Reed, of Cincinnati, O., said that before doing an abdominal section for inflammatory disease within the pelvis, it is always well to weigh the medico-legal aspects of the case. We frequently encounter cases in the operating room having a history of symptoms indicating inflammatory disease within the pelvis antedating for years her presentation to the surgeon—symptoms that ought to have earlier directed attention to the seat of the trouble, and led to surgical interference. Such cases when finally subjected to an operation frequently result in death; and it becomes a medico-legal question of no little interest to determine where the responsibility for it lies, whether at the door of the one who neglected to use the knife early, or of the one who, recognizing the increased gravity of an operation upon a patient run down and debilitated by long continued disease, finally puts her upon the operating table.

Dr. Geo. J. Engleman, of St. Louis, Mo., referred to the case of a young girl who was many years ago brought to his father's office, after having been examined by all the

prominent surgeons of the city, who were in doubt as to a diagnosis. She had all the evidences of hip-joint disease, when examined without an anæsthetic, but under chloroform it was apparent that no organic disease of the joint existed. Upon further investigation, it was discovered that some slight uterine inflammation had resulted from taking cold during menstruation, and persisted until this reflex trouble about the hip was induced. At that time these reflexes were not so well understood; but we are more familiar with them now, especially the gastric disorders that are so common a manifestation of unsuspected uterine troubles, and such a difficulty in diagnosis will hardly occur.

Dr. Howard H. Kelly, of Baltimore, mentioned cases illustrating the frequency of reflex trouble of the hip, consequent upon uterine or pelvic disorders.

Dr. W. F. Westmoreland, of Atlanta, Ga., thought the general surgeon should call in a specialist to confirm his diagnosis in cases liable to medico-legal complications. He considered that too many men looked at things through the eye-glass of the specialist, with a vision seeing only at their astigmatic angles. In all suppurative diseases we are liable to implication of the joints, and more especially of the hip. As a fact of possible medico-legal importance, it is well for us to remember that a woman, with some insidious nervous trouble coming on for years, will frequently refer her condition to some intercurrent accident when, in reality, it antedates it by years.

Dr. Thomas Opie, of Baltimore, Md., expressed the opinion that the frequent miscarriage of medico-legal justice was due not so much to the ignorance of the physician, as to the stupidity of the eminent judge and jury; and cited an illustrative case in which a question of parentage was decided in opposition to the plain facts as testified to by the attending physician.

Dr. Joseph Price, of Philadelphia, has not found the general practitioner very much at fault in regard to diagnosis. If he errs, it is because he hesitates to subject his patient to that searching physical examination which the specialist practices daily. Do not mystify the consulting surgeon by saturating the patient with opium, and thereby concealing symptoms. Cases were cited, illustrating the frequency of reflex troubles, and the errors of diagnosis, when the pathological condition was, in reality, confined to the pelvis. A patient was recently brought to him with an apparatus applied for hip-joint disease. A neurologist had

cauterized her seventy times for supposed sciatica. A small uterine fibroid was removed, and the symptoms of hip-joint disease disappeared. There is no such thing as "concealed gestation," to which some reference has been made. The expression simply conceals the examining physician's ignorance. Ectopic pregnancy requires immediate operation—a delay of twenty-four hours being inexcusable, and liable to be fatal. The speaker has a pocket case containing the instruments necessary for this operation, so as to be ready to respond to a call at any time. In such a case, there is no time to wait.

Dr. I. S. Stone, of Washington, D. C., mentioned a case presenting such contradictory symptoms that, even under chloroform, a satisfactory diagnosis could not be made.

Dr. Potter closed the discussion by saying that, as there had been but little criticism of his paper, it only remained for him to emphasize certain points in the discussion. The case he reported was of less importance than the principle it signified. When one of these neurotic women, the subject of pre-existing unrecognized disease, receives an injury, she refers all subsequent discomfort to the accident, and enters a suit for damages. We should be on our guard in cases of this kind, and testify so as to secure justice.

Dr. John D. S. Davis, of Birmingham, Ala., read a paper upon the

Medico-Legal Aspect of Intestinal Surgery.

He said that the egotistical contradictions so often observed in the courts, by medical men, have caused the courts and juries to hold in low estimation the testimony of medical men generally, and so lessen the influence of the competent that their testimony is placed on a par with those possessing no attainments whatever in this special field of surgery. There being no prerequisite qualification or requirements as to knowledge or ability to give expert testimony, the testimony of the most capable and experienced might be easily vitiated and invalidated by the dishonest.

The questions when and who should do intestinal surgery, and give expert testimony on the same, are of vital interest to the profession—questions of no doubtful issue, and matters of the greatest concern to the people. He thinks it a crime to attempt intestinal operations on man previous to much successful experimental work on living animals—the same personal observation, training, and experimentation being necessary to attain to that peculiar knowledge which

is prerequisite for a proper interpretation of facts observed by others for hypothetical consideration.

Intestinal operations must be done quickly. If prolonged to two or three hours, the patient will die from exhaustion. It is all-important that the surgeon do these intestinal operations rapidly. The abdomen should never be opened without having on hand a good supply of anastomotic devices,* which may become necessary to repair intestinal incontinuity by anastomosis. He never goes into the abdomen without having a good supply of plates or mats ready for immediate use. The author gave this illustration of the necessity of competency and rapidity in intestinal work: A physician, of middle years—a noble man and a fine general surgeon—after seeing a rapid operation for the closure of four stab wounds of the ileum, thought it easy enough, and killed his next patient with a one hour's search for a perforation which did not exist. He lacked that skill that comes of actual working experience. As good surgical aid could have been had, the operator deserves the severest condemnation. Other illustrations are given, but will only quote the third, which presents the other side. This surgeon, with ability and skill far in excess of the other, refused to operate in a gunshot injury because, as he said, he could get another surgeon in whose hands the life of his patient was safer. That was pluck and true philanthropy. He was placed, by worthy and unselfish volition, on the altar of human sacrifice in person, name, and deed. He did not fail to remember that a human life was of paramount importance to his professional reputation and popularity. He understood his incapacities and did not operate, just as he would not have testified if he had been placed in the witness box. He, as all physicians should be, was thoroughly imbued with a spirit of philanthropy, honesty, and integrity. Let us engage in inaugurating a policy of candor and honesty for those to whom we vouchsafe surgical aid on the one hand, and, on the other, encourage a desire on the part of the profession to imitate the glorious example of putting duty before professional policy. And it will require no prophet's power to declare that the outcome of such a policy will be the saving of many lives—the protection of the profession from slander—facts teeming with seductive argument and eloquent appeal.

In discussing this paper, Dr. George Ross, of Toronto,

* *Davis' cat-gut plates or mats* preferred. Made by Johnson & Johnson, 92 William St., N. Y.

Canada, cited a case of gastro-enterotomy to fortify Dr. Davis' position. He does not think the operation should be performed on man until the operator has gained some skill by experiments on dogs.

Dr. W. F. Westmoreland, of Atlanta, Ga., thinks that intestinal surgery is outside of the field of general surgery. He sends such cases to specialists, unless they are emergencies. But any penetrating wound of the abdomen, such as by gunshot or stab, requires a prompt operation—within half an hour, if practicable.

Dr. G. R. Dean, of Spartanburg, S. C., emphasized the views expressed.

Dr. Robert T. Morris, of New York, remarked that the law really protects surgeons, contrary to the views expressed by Dr. J. D. S. Davis. If the testifying surgeon showed himself familiar with medico-legal evidence, it would deter unscrupulous lawyers from the tricks of the bar in the lower courts.

Dr. Joseph Price referred to a very successful operation by Dr. Gaston, and to other cases in the practice of Southern surgeons. He advocated prompt surgery.

Dr. W. E. B. Davis, of Birmingham, Ala., endorsed the remarks above. He thinks that Senn's gas test has done much to retard abdominal surgery, because it increases shock, and may lead the surgeon to dangerous delay.

Dr. Baxter, of Chattanooga, Tenn., favors early interference, but cited a case of severe gunshot wound of the abdomen—17 balls penetrating the cavity—in which an operation was done six days after the injury. There was no peritonitis, but the liver was enormously enlarged. Recovery followed in some months. This case proves that in a certain proportion of cases recovery will take place, under favorable conditions.

Dr. H. O. Marcy, of Boston, Mass., thoroughly approves Dr. J. D. S. Davis' paper. He suggested the injection of gas up the bowels (he prefers compound oxygen) *after* an operation, to reveal whether or not all perforations or rents in the intestine have been closed.

Dr. John A. Wyeth, of New York, spoke *ex tempore*, detailing what he believes to be

The Best Method of Administering Ether.

He said that the first article of his surgical faith is safe anæsthesia. He referred to his having formerly said that he had never learned to give ether properly. He uses chloroform in about fifty per cent. of his cases, but believes

ether to be the safer agent in general surgery. The quantity of ether employed has been used as an objection, on account of the resulting renal or respiratory disease. He now gives ether with the Ormsby inhaler. It is the best he has seen, and requires a minimum of ether. Prolonged anæsthesia was recently sustained in a young man with one ounce. With this inhaler the patient partly breathes the same air over and over again, as the ether vapor is confined in a rubber bag, so that the anæsthesia is, to a certain extent, safe carbonic acid gas asphyxia. The ordinary inhalers require the constant admixture of free air and ether. This chills the respiratory tract, resulting probably in kidney or other disease, etc.

The next article was by Dr. Howard A. Kelly, of Baltimore, Md., who spoke of

Hand Disinfection.

His remarks, based on laboratory investigation, were illustrated with test tubes, containing colonies of staphylococci. To prevent the entrance of these micro-organisms into the system was to prevent suppuration. Limiting his remarks to hand disinfection, he had had the experiments made to prove that the germs of suppuration (*staphylococcus pyogenes albus*, and *aureus*) are found on the hand even after what is generally regarded as good hand washing, and to ascertain what germicide was efficient. He lays much stress upon the thorough use of soap and water. The following conclusions were reached after thorough experimentation:

1. Staphylococci were found on all the hands examined.
2. These cannot be wholly removed by scrubbing from ten to twenty-five minutes with a sterilized brush and soap in water at 40° C.
3. A 1:500 bichloride solution used for two or three minutes is not germicidal.
4. A saturated solution of potassium permanganate in hot water, decolorized with a saturated solution of oxalic acid, is the most efficient disinfectant for the hands.

Peroxide of hydrogen failed to destroy the germs. The practical conclusion of all is to thoroughly scrub hands with soap and water, and then dip the hands in the solution of permanganate of potash.

Dr. George Ross, of Toronto, in discussing Dr. Kelly's talk, said he does not believe in going to such extremes. Practical results are sufficient. He thinks soap and water and bichloride will suffice for practical purposes; although, during

the past summer, he had had excellent results in his hospital under ordinary aseptic precautions.

Dr. Buckmarster endorses Dr. Kelly, and believes in furthering his progress, in order that more accurate results may be reached.

Dr. Marcy, in referring to germs, spoke of the soil and of the seed. He thinks there have been great advances in our knowledge of both, and that good has resulted. We must hold ourselves open to such papers as Dr. Kelly's. The main idea in operations is to avoid infection.

Dr. Wyeth endorses Dr. Kelly, and thinks he is in the right direction.

Dr. Wm. E. B. Davis favors antiseptics.

Dr. Baxter wishes Dr. Kelly to experiment with regard to the antiseptic measures necessary in machinery wounds of the hand, where dirt and grease are present.

Dr. Kelly, concluding, said that the staphylococcus is the germ of suppuration, but that it does not always produce suppuration, even in conditions favorable to this process. We have much to learn yet in connection with the subject. Those who do not favor disinfectants prevent abdominal infection by drainage.

The Pedicle in Hysterectomy; How Formed; Its Subsequent Behaviour; Its Final Condition.

Dr. I. S. Stone, of Washington, D. C., read this paper. The three principal methods of dealing with the pedicle were described and illustrated by colored drawings. The statistics are far better now than ovariectomy claimed after it had become an operation of election. Dr. Stone gives particular attention to tying off the broad ligaments and the use of the elastic ligature. Sewing the parietal peritoneum to that of the pedicle in the extra peritoneal cases was also dwelt upon. The method by "ventro-fixation" had given good results, and serves to accomplish two important purposes—a speedy convalescence, and an avoidance of the disagreeable sloughing which follows the use of the wire clamp. It may also be used in some cases of short pedicle, where the wire may not easily be applied. The methods were compared and statistics furnished, showing that the extra peritoneal method with "wire" and "pin" gave better results than either of the others; "ventro-fixation" came next, and the intra-peritoneal last, with a large mortality. A method of closing the capsule over the stump was described, which the author claimed would answer for either

dropping it, or sewing in the wound—"ventro-fixation." In the latter case the suspensory sutures are placed, and the pedicle sewed in and under the lower end of the abdominal incision. Great care is required in closing the capsule over the raw surface of the stump, so that separation may not occur. Owing to the peculiar contractile nature of the capsule, care must be taken to leave sufficient length for approximation of peritoneal surface. The uterine arteries are to be tied in any case when hæmorrhage is likely to occur, and drainage may be required. All myomatous tissue should be removed, which can only be affected in some cases by a process of "reduction" of the pedicle. This is very important, as in the operations where a large amount of myoma is left, more time is required for atrophy and absorption to reduce the pedicle to its proper size. Great danger is apt to follow, where a broad base of the tumor is left in either method of treatment, because this mass must be disposed of before the patient entirely recovers.

The author had observed a sufficient number of cases to declare that permanent fixation of the stump to the abdominal wall was the rule, where the extra abdominal methods were used, and especially when the broad ligaments were cut away to prevent traction.

Dr. Ross, of Toronto, said that the credit of hysterectomy belongs to Eastman, of Indianapolis. He illustrated by drawings a recent operation which he had performed in which the following points were gained: Trendelenburg's position; doing away with clamp and pedicle; and avoiding the ureter.

Drs. Marcy and Price joined in the discussion. The latter exhibited plates of fibroids, and criticises the suspension method in the operations discussed, on account of the danger of ventral hernia. He had operated sixty-nine times with four deaths. He applies dressing forceps as land marks during the reduction in size of the pedicle, etc., to enable him to operate rapidly and safely.

Dr. Robert T. Morris, as the result of his few operations, had learned to ask, Why make a pedicle at all?

Dr. Stone, in closing, hoped that the time would soon come when we will not have any pedicle to deal with.

During the afternoon, Dr. L. S. McMurtry, of Louisville, Ky., delivered the "Annual Address of the President," making

A Plea for Progressive Surgery.

"Conservative surgery" is progressive surgery; but of

late this term has been made to mean a very different thing from the true Websterian definition; in fact, some use the term as the antithesis of progressive surgery. This is all wrong. For instance, it is *conservative surgery* to perform ovariectomy as soon as the ovarian tumor is discovered before general health breaks down; to remove a ruptured tubal pregnancy at once is conservative, etc. Prompt surgery under such circumstances is good surgery—it preserves health; to delay is to make a greater percentage of mortality, and is bad surgery. On the other hand, reckless surgery is not to be tolerated. No progressive or conservative gynecologist of to-day approves the removal of the ovaries and tubes except for lesions which destroy the health and usefulness of the individual, and which are incurable by non-operative treatment. But in the face of desperate conditions of disease and injury, where there can be no safety in delay and palliation, the only treatment worthy of consideration is the aggressive course which promises success. Thus Marion Sims advocated, as the proper course of treatment in every case of gunshot wound of the abdomen, the opening of the abdomen, so as to search for the bleeding points and secure them, and suture intestinal perforations. Under all such cases the most heroic surgery is conservative, and any other course is not conservative. One of the most convincing arguments as to the efficacy of surgery is that surgeons believe in it, and promptly invoke its aid in behalf of their own lives and that of members of their families. Those who only do surgery as a last resort, are disposed to oppose surgical treatment, and look upon it as dangerous—as only to be resorted to as a last desperate chance. Such parties are right to this extent only: It is dangerous when utilized as a last resort—not otherwise. When the whole profession realizes that surgery is at all times conservative; when major operations are performed by those who believe in them, and have by apprenticeship acquired surgical skill, then will the progress of this great science and art be unobstructed by misunderstanding and misrepresentation.

Dr. Thomas Addis Emmet, of New York, discussed the subject of—

Injuries to the Pelvic Floor, and the Method of Repairing the Same.

The author modestly claimed the credit for the operation for repair of the lacerated pelvic floor. He spoke of the word “laceration” as a misnomer, and said that there was

no so-called "perineal body." He explained the anatomy of the parts involved; but added that the operation could be much better understood by being seen. His remarks were illustrated on the blackboard, and for this reason a thorough report of his able demonstration of the subject cannot be given.

Drs. Price, Marcy, and Kelly discussed the paper, each acknowledging his indebtedness to Dr. Emmet, but practising a modification of his method. Dr. Kelly believes with Dr. Price in suturing further up than Dr. Emmet advises.

Dr. Joseph Taber Johnson, of Washington, D. C., in his article on

The Growth of Fibroid Tumors of the Uterus After the Menopause,

Cited several—perhaps a dozen—cases in which he had operated for such tumors in women from 45 to 60 years old, which had grown, instead of diminishing in size, after the menopause. His observations prove that in many cases these tumors increase, rendering surgical relief necessary. It is not wise, therefore, for physicians to advise patients, with developing fibroids, to wait until after the menopause. It is best to advise laparotomies early. Complicated conditions may also arise after the climacteric, and the fibroids may become cystic, and make a later operation more dangerous.

Dr. I. S. Stone, of Washington, D. C., commended Dr. Johnson's remarks, and urged the advisability of an operation before complications arose. All fibroid tumors that extend into the abdominal cavity, and that do not yield to other measures, should be removed.

Dr. Cornelius Kollock, of Cheraw, S. C., had noticed that fibroids of the uterus, which kept on growing during and after the menopause, undergo cystic degeneration.

Dr. George J. Engelmann, of St. Louis, thinks that fibroid tumors are as apt to grow as they are to diminish in size after the menopause; and that the renal trouble which sometimes accompanies these enlarging tumors is due to the pressure upon the ureters.

Dr. Joseph Price, of Philadelphia, stated that complications were due to delay. He urged removal of appendages in all small fibroids demanding an operation. Timely operation often prevents a cystic or a malignant change.

Dr. Charles A. L. Reed, of Cincinnati, O., followed with a paper on

The Surgical Treatment of Anterior Displacement of the Uterus.

He gave particular attention to the surgical relief of first anteflexions caused by and complicated with cystocele and perineal insufficiency. He recommended an operation, which he had devised, by which the vesico-vaginal septum was narrowed in the usual way for cystocele, but in which the denudation was carried higher, involving the upper portion of the vaginal wall and the anterior surface of the cervix, and in which the cervix thus denuded was stitched to the vaginal wall. Secondly, he discussed Schultze's theory of the relation of contracture of the utero-sacral ligaments to the causation of anteflexion, and affirmed its correctness. He recommended preliminary treatment by rest, pelvic depletion, and massage, for the relief of this condition within the ligaments. In those cases in which symptoms from pressure, obstructed dysmenorrhœa, and sterility persist after the correction of the trouble within the ligaments, he recommended an operation in which the posterior lip of the cervix is divided up to the vaginal junction, an ellipse of tissue removed from either side, and a longitudinal suture passed through either lip, from its lower angle to the upper angle of the incision, and tied. The os is thus drawn upward and backward, and the uterine canal straightened. He emphasized the danger of forcible dilatation, and referred to his own experience to confirm the fact that notwithstanding aseptic precautions, purulent trouble both within the cellular tissue and the appendages is liable to ensue.

The Part the Shoulders Play in Producing Laceration of the Perineum, with Suggestions for its Prevention.

Dr. W. D. Haggard, of Nashville, Tenn., discussed this subject from an anatomical and physiological standpoint. It seems to be too much overlooked that the diameter of the shoulders is greater than that of the head. As soon as the head emerges, the perineum contracts around the neck of the child, and often there is not time for it to relax before another uterine pain rushes the shoulder out, and of course lacerates the perineum. The conclusions arrived at were that the injury, though probably first caused by the head in all instances, was made worse by the passage of the shoulders; that the head of the child needed much more attention than the perineum of the woman; that it should be restrained and guided by appropriate pressure on the advancing part. This can be best done with the thumb in the rectum, and the fingers on the perineum or in the vagina. Supporting the perineum does harm rather than

good. The woman should invariably lie on the left side, in order that the measures recommended may be facilitated.

Dr. Bedford Brown, of Alexandria, Va., believed, with Dr. Haggard, that the passage of the shoulders increases any previous injury done the soft parts by the head. He derives but little, if any, good from supporting the perineum. He endeavors to produce gradual dilatation by laying the patient on her side, introducing two fingers into the vagina and drawing its posterior wall towards the rectum. In robust, unyielding women he employs Sims' speculum in the same way.

Drs. Marcy, Baxter, and Nash, spoke on the subject.

Dr. W. E. B. Davis advises chloroform, and would never let the head come through during a pain.

Dr. Engelmann wants the word "support" dropped, and "protection" substituted when speaking of the perineum.

Dr. Haggard closed the discussion by laying additional stress upon the position of the woman, and upon letting the perineum alone.

Morning Session, November 12th.

The first paper read was contributed by Dr. J. A. Goggans, of Alexander City, Ala.

Abdominal Section in a Case of Cyst of the Mesentery, with Remarks.

He stated that he had been induced to report this case from the fact that cysts of the mesentery are extremely rare, and that operations for their removal were generally fatal. He had been able to find the record of one case of cyst of the mesentery removed by enucleation by Guyon. The patient died on the seventh day after the operation. One case was operated upon by Sir Spencer Wells. The operator in that case incised and drained the cyst, but the patient died within a few weeks. Three cases were operated upon by Péan, only one of which recovered. One case was operated upon by Watts, but he did not know the result in this case. One case was operated upon by Cortes, who incised and drained the cyst, but the patient died from septicæmia and hæmorrhage. One case was operated upon by Dr. Bantock, who removed the cyst by enucleation, and the patient recovered. The conclusion arrived at, both by Dr. Bantock and the pathologist who examined the specimen, was, that it originated from some fœtal structure, possibly some of

the rudiments of the permanent kidney. Dr. Greig Smith, in a personal communication, says that he knows of two cases of mesenteric cysts operated upon by his friend, but they had not yet been published, and therefore he could not relate them to him. The patient referred to by Dr. Goggans was a young woman of 21 years, daughter of a physician of Columbus, Ga. She had not been well for about two years, but did not know that her abdomen was becoming larger until three months before he operated upon her. During these three months she had been treated for abdominal dropsy, and had suffered much uneasiness and pain in the abdomen. At the time of the operation, her pulse was 120, and temperature 100° Fah. The cyst was quite large, and occupied mostly the left side of the abdomen, extended from under the ribs into the lumbar region, dipped downward into the pelvis, and extended three or four inches beyond the median line of the abdomen into the right side. He first removed about one quart of the fluid by aspiration.

On February 7th, 1891, the fluid was thin and of a dark color, and contained albumen, phosphates, and chlorides. The patient was not benefited by the operation, and the abdominal section for the removal of the cyst was made on February 24th, 1891.

The cyst was covered by the omentum and mesentery, and loops of small intestine were imbedded in its walls. An attempt was made to enucleate it, but hæmorrhage was so free that the idea was abandoned. A point as remote as possible from blood vessels and intestine was selected, and the cyst incised and drained. More than one gallon of a thin, dark-colored fluid was evacuated. The sac was irrigated with hot water, the lips of the incised sac stitched to the upper angle of the abdominal incision, and a glass drainage-tube introduced to the bottom of the cyst. The abdominal incision was then closed with silk-worm gut sutures. Dr. Goggans was confident that the cyst was retroperitoneal. Time occupied in the operation was twenty-five minutes. The sac was irrigated three or four times in the twenty-four hours, and the drainage-tube gradually withdrawn. The patient suffered much from nausea and vomiting, which he said he attributed to the close connection between the walls of the cyst and the loops of small intestine.

The patient made a good recovery in about thirty days. He presented a picture of the patient which was taken the

first of November, 1891, which showed her still to be in good health.

Dr. Robert T. Morris, of New York, remarked that after such operations a small opening in the mesentery is apt to give rise to hernia.

Dr. W. E. B. Davis, of Birmingham, to whom Dr. Goggans referred as having rendered skilful assistance in the operation, stated that a diagnosis of this case without incision was impossible. Dr. Goggans was sure it was not ovarian. Tying the tube firmly into the upper angle of the wound worked well. There is no trouble from the pedicle.

Dr. Goggans, in closing, said that he gradually withdrew the first tube, and inserted a smaller one of rubber.

Thinness of Uterine Walls Simulating Extra-Uterine Pregnancy.

Dr. George J. Engelmann, of St. Louis, Mo., in his paper on this subject, spoke of the fact that after consultation with many leading men, he had learned that the abdomen has been opened by some surgeons for this very condition. Two cases that came under his care were mentioned. In the first case the patient, mother of three children, youngest twenty months old, was still nursing, complained of something coming down. There were pain and swelling in right groin, fullness of abdomen, nausea and vomiting after meals, and cystocele. A tumor was found in the groin, movable independently of the uterus. The cervix could be felt underneath. The soft copper applicator, with cotton wrapped around the end, entered over three inches in a slightly anterior direction, but no connection could be traced between the uterus and the tumor. The diagnosis was a solid, round, tumor superimposed on the uterus, or possibly adjacent to its anterior wall. It did not resemble the usual form of a pregnant womb. Treatment was expectant, and astringent applications were made to the uterus. At the next examination, the tumor had disappeared, but reformed. There was no resemblance in these changes to the contractions of a pregnant uterus. The tumor soon went away entirely. Subsequently the parts of a child were felt, by vaginal palpation, with unusual distinctness where the tumor was, and there also by palpation over the abdominal walls. It did not feel as if any uterine wall could exist between the examining hand and the foetus. In fact, extra-uterine pregnancy was now diagnosed, and the patient was instructed to send for him immediately if a symptom of rupture, etc., developed. A uterine applicator could be easily

passed its full length, but never anteriorly where the fœtus was. This was in the fifth month, when miscarriage occurred, showing that normal uterine pregnancy had existed. The second case had been thought by others to be ectopic pregnancy or a distended tube. Menstruation was irregular and painful, and the pelvic disturbance existed. She had been treated elsewhere for ovarian and uterine disease. A sac, feeling like a thick bladder half full of water, extended from the left groin almost to the right side. The cervix was felt as a hard body underneath this, and seemed to have no connection with the tumor. There was no symptom of pregnancy. Under chloroform the connections between the hard and soft tissues were distinct. The applicator entered first in a left and ante-flexed direction, then into the tumor. A premature labor was the result.

Dr. L. S. McMurtry, of Louisville, said the paper read by Dr. Engelmann was very timely. Cases of attenuated uterine walls in pregnancy are most puzzling. He recalled a case which came to him three years ago, where the patient had been alarmed by feeling the parts of the child with her hand placed on the abdomen. The head, limbs, and smaller parts of the child could be felt distinctly. Labor came on in due course of time, and she was safely delivered. He must differ with Dr. Engelmann, however, as to the propriety of using the sound in any case of suspected pregnancy. Indeed, this instrument is of little aid in the diagnosis of any pelvic tumor or disease, and is capable of a great deal of harm. It is very easy, even in capable hands, to perforate the uterus and penetrate the peritoneal cavity with the sound. It has often been done with fatal results. There is nothing which the sound discloses in diagnosis which cannot be more reliably determined by the bimanual touch. Certainly in cases of suspected pregnancy the sound should not be used.

Dr. George Ross, of Toronto, Canada, remarked that in cases in which this thinness of the wall existed, he would wait, because in his experience the wall of an ectopic gestation was not thin, but thick. In one case of operation at full term, he found the wall of the sac one-half inch thick. He had seen one case with such thin walls at full time operated upon for hydramnios. The fœtus was of course intra-uterine, and the wall felt like a towel thrown over the fœtus. He had seen and examined by bimanual method, about ten or twelve cases of ectopic gestation, one before rupture, and in each case there was no distinctly cystic feeling.

Dr. George H. Rohé, of Baltimore, Md., agreed with Dr. McMurtry. He thought the uterine sound a dangerous instrument, and its use should be consigned to the past as not being even a reliable aid to diagnosis. Rectal palpation would have revealed the true character of the cases reported by Dr. Engelmann—a thing which it is shown the sound did not do.

Dr. J. McF. Gaston, of Atlanta, Ga., spoke of having come near committing a blunder. The case had been treated under an impression of womb trouble, and hence a saturated solution of carbolic acid in glycerin had been used. But palpation gave no sign of fœtus in the uterus. The tumor was on the left side. The sound passed eight inches. Extra-uterine fœtation was believed to exist. Preparations were made for an operation, when he was called to the lady to find her in ordinary labor.

Dr. Engelmann, in closing the discussion, said that he agreed with Dr. McMurtry as to the use of the sound, and had seen the uterus penetrated by the ablest gynæcologists in the days when the sound held sway. A delicate applicator can be safely and easily used. Bi-manual palpation under an anæsthetic is the most reliable means of diagnosis. He did not understand how the apparent absence of uterine tissue would invalidate the diagnosis of extra-uterine pregnancy.

Dr. Robert T. Morris, of New York, did not read the paper on the programme, because his experiments were not yet completed. He could dissolve an impacted gall-stone in a few minutes, but it was necessary to find the least irritating solvent, and that would require experience with several more cases before he cared to make his method known. He therefore read a paper entitled

The Removal of Necrotic and Carious Bone with Hydrochloric Acid and Pepsin.

Many deforming and dangerous operations could be avoided by adopting a method which he thought was now complete. An opening is to be made directly down to the dead bone, and a large sinus formed. All other related sinuses are then made to lead into the large single one if possible. At the end of about a week, when granulation of the walls of the sinus has begun, the cavity is injected with a three per cent. solution of hydrochloric acid in distilled water. The frequency of making injections varies with the nature of the case. If the patient were confined to bed,

injections could be made every two or three hours. If the patient were going about, injections are made only at night, and the patient is directed to assume a position in bed that will retain the acid solution. This acid injection decalcifies dead bones rapidly, but as only superficial layers were attacked, other experiments had failed because they could not get rid of decalcified bone readily, and the acid solution did not penetrate to deep portions through it. Dr. Morris' plan consists in injecting into the sinus, at intervals of about two days, an acidulated pepsin solution, and this would digest out the decalcified bone in two or three hours. The whole process was then repeated until the sinus closed from the bottom, which it would do when the last dead bone was out. Dr. Morris had proved by experiments upon the carapace of the turtle that living bone would be decalcified if strong solutions of mineral acids were used, but with a two or three per cent. solution of hydrochloric acid granulation would begin upon living bone before decalcification could take place. Microphotographs of bone, showing the result of experiments, were shown.

Dr. Bedford Brown, of Alexandria, Va., endorsed the remarks of Dr. Morris, and mentioned a case of caries of the bones of the toes, with necrosed bone, yielding to applications of dilute hydrochloric acid. He finds the dilute official acid the best agent of all he has used, for the subsequent examination of the patient's urine revealed sugar, and Dr. Brown was sure that the gangrene was dietetic.

Dr. J. A. Goggans, of Alexander City, Ala., referred to a case in his practice which sustained the estimate put upon dilute hydrochloric acid for the purpose named.

Dr. H. O. Marcy, of Boston, Mass., expressed his appreciation of the worth of Dr. Morris' paper.

Dr. J. D. S. Davis, of Birmingham, Ala., endorsed what had been stated by the speaker preceding.

Dr. Morris, in closing, spoke of the strong acid as available only in exposed places—the dilute being indicated where deep structures are involved.

Dr. Landon Carter Gray, of New York, N. Y., read a paper on—

The Present Status of Cerebral Surgery.

The cerebral centres were demonstrated on the black-board. The speaker first passed in review our knowledge of localization of functions of the brain, stating that we were well acquainted with the functions of the motor

area of the third frontal convolution, the island of Reil, the two upper temporal convolutions, the cuneus, certain portions of the basal ganglia, the base of the brain, and the cerebellum. We know, however, nothing of, or have still under discussion, the question of the localization of the centres for the sensations of touch, pain, muscular sense, temperature sense, most of the parietal lobe, and most of the temporo-sphenoidal lobe, with the exception of the olfactory lobe. He stated that operations for fracture of the skull, with or without hæmorrhage, for abscess and for tumors that were removable and were localizable, were usually successful; those for so-called idiopathic epilepsy were utterly valueless, as were also those for epilepsy supposed to be due to genital or ovarian irritations, whilst those done for epilepsy, due to removable and localizable lesions of the intracranial contents were usually successful so far as the lesion was concerned, although it was a grave question as to whether the epileptic habit was ever cured. The latest operation for idiocy, supposed to be due to premature ossification of the fontanelles, was still under discussion and consideration, the cases being too few and too recent to permit of any conclusion; whilst the operations for hydrocephalus and for epilepsy due to such early infantile and fetal lesions as porencephalus, hæmorrhage, and meningitis were indefensible. He further impressed upon surgeons the great difficulty that there often was in finding a subcortical lesion of the centrum ovale that was deep-seated or small, and the fact should be borne in mind that there might be no decussation of the motor fibres from the hemispheres; so that a lesion would be found upon the same side as the paralysis.

Dr. W. F. Westmoreland, of Atlanta, Ga., remarked that in many cases certain symptoms localize the seat of the trouble. We can then explore for the disease. Abscess may be found. There is no case of recovery from a cerebral abscess without surgical interference. Unless the trouble is at the base of the brain, recovery occurs in from 70 to 80 per cent. of cases selected for trephining. He asked Dr. Gray whether or not a vacuum was used in the exploring needle when looking for a deep-seated cerebral abscess? Soft matter will often flow into the needle thus used. Delicacy of touch is increased by the use of a probe with a slightly bulbous point. In all of his cases of cerebral abscess, there has been normal or sub-normal temperature. He remarked that a good point had been made regarding

epilepsy, which is only a symptom after all. Many cases are reflex, there being no change in the brain. Habit may establish the countenance of epilepsy. In old cases operations are not justifiable, unless there is necrosis of bone, a spicula in the brain, or some such cause. Reference was made to Weir's case. Sometimes an exploratory operation is justifiable.

Dr. Walker, of Evansville, Indiana, referred to a case of a woman, aged fifty, who had paralysis of the face, then of the arm, and slight paresis of leg. An autopsy revealed a sarcoma at the point localized. An operation could not have been successful. Another case was that of a lady who had convulsions and spasmodic seizures of the right arm, but there was no suspicion of syphilis. Iodide of potassium, which he thinks indicated in all cases of brain, was given to this patient, and it made her condition comfortable.

Dr. Paul B. Barringer, of the University of Virginia, referred to thickening of the cranial bones, and to spiculæ projecting into the cortex as causes of epilepsy. He mentioned the case of a youth, aged fifteen, who had suffered from epilepsy six or eight years, and who was having a convulsion every hour when he saw him. He adjusted eyeglasses for defective vision, and the seizures ceased for thirty-nine days; but they returned in full force when the glasses were left off.

Dr. Hunter McGuire, of Richmond, Va., related the case of a negro upon whom he operated in an asylum soon after the war. There was no history connected with the case. The man roamed around the room like an animal, unable to articulate. Once in a while he would have a spasm. The speaker found a slight depression on the side of the skull, and after trephining, removed a spicula of bone three-fourths of an inch long. There was more injury done on the inner than on the outer table. As soon as the patient had rallied from the chloroform, he asked, "Where is the army to-day?" "Where was it yesterday?" queried the operator. "Yesterday it was at Manassas," was the reply. The man then detailed his own history, telling that he had been struck on the head (six years before) with an iron boat-hook, since that time had been in the condition described. The rapid change for the better was remarkable. He was not strong mentally afterwards, but lived two years, dying of typhoid fever. Any little surgical procedure will sometimes do good in impressionable cases.

Dr. Robt. T. Morris, of New York, N. Y., referred to a case of exostosis, the prominence being as large as a mandarin orange, and pressing on the cortical optical area of the brain.

Dr. Gray, concluding, said that he did not discuss the subject of reflexes in his paper. He doubts them. He had written to a large number of men on the subject of preputial reflex, and could not get the data. He has verified Dr. McGuire's remark about the temporary benefit derived from cutting a small piece of flesh out of the buttocks. In some cases of epileptic habit, a reflex may be present. He does not favor a small exploratory incision into a cerebral abscess, on account of the danger. He stated that Dr. Wyeth did a bolder operation than some others for relief of abscess. He makes a series of holes within a certain area, and breaks from one into another, thus opening up quite an area of the brain.

Dr. J. McFadden Gaston, of Atlanta, Ga., followed with a paper on—

Some of the Complications of Psoas Abscess.

His remarks were to the effect that inflammation develops from pus originating in the caries of lumbar vertebræ, different from psoitis, which may be the result of direct violence or disease, or be of idiopathic nature. Pressure on the psoas muscle rends tendons, resulting from inflammation, and suppuration within its sheath results. It does not imply a scrofulous taint, which characterizes lumbar abscess from caries of the vertebræ. The psoas abscess is accompanied with retraction of the limb on the affected side, down to the insertion of the tendon of the muscle into or behind the lower trochanter.

There is a tendency towards the surface in front of the quadratus lumborum, and timely evacuation by incision should prevent its extension towards Poupart's ligament, or its perforation of the large intestines, followed by a fistulous opening or any future trouble.

A case occurred in 1888, in which psoas abscess was diagnosed in the right iliac region, but on the next day the fluctuation had disappeared, and a trocar revealed a tough secreting membrane with a cavity, but no pus. The inference, from inspection of the evacuations from the bowels, was that a purulent collection had been discharged into the colon through a perforation of its walls.

An incision, made after the lapse of a year with signs of

inflammation over the dorsum of the ilium, found no pus. But there was subsequently a free discharge of pus from the line of incision, and upon using a copious warm water enema, there was a free discharge of water from the fistulous opening over the ilium. This gives conclusive evidence of the communication of the external wound with the bowels, and he will attempt the obliteration of this opening into the colon by dividing the edges, and closing it with the Lembert suture.

Another patient was examined on July 10th, 1891, at the Providence Infirmary with induration in the line of the psoas muscle, and a space in the iliac region that gave the impression of a cavity. The use of a trocar revealed a dense resisting membrane without pus, and was not followed by any notable change.

A report on August 31st, after leaving the Infirmary, indicated that the patient still suffered from a light, hard feeling in the stomach. The impression that pus was discharged from a psoas abscess into the colon, resulted from the previous history of the case in connection with my exploratory punctures.

A third case occurred in a boy 12 years, with fluctuation in the left iliac region, and its disappearance with the presence of pus in the evacuations from the bowels. He has since recovered without any local or general trouble.

The gravity of any radical operation for the relief of perforation into the intestines renders it highly important to resort to timely external incision for evacuating the pus in psoas abscess. When the case has resulted in diffuse abscess along the thigh and leg, the operation at the site of origin does not suffice, but measures are required to obliterate the sulci along the muscular sheaths and fascia throughout the limb.

Dr. Bedford Brown, of the Executive Council, recommended the admittance of the following *new members*: Drs. Henry O. Marcy, of Boston, Mass.; H. Berlin, of Chattanooga, Tenn.; G. R. Dean, of Spartanburg, S. C.; John A. Wyeth, of New York; Henry Clark Coe, of New York; Richard J. Nippe, of Chattanooga, Tenn.; Landon B. Edwards, of Richmond, Va.; J. B. Holmes, of Rome, Ga.; H. Briler, of Chattanooga, Tenn.; A. M. Hartley, A. T. Vance, W. C. Doogan, of Louisville, Ky.; J. B. Murphree, of Murfreesboro, Tenn.; James Evans, of Laurens, S. C.; E. Walker, of Evansville, Ind.

During the Afternoon, the Executive Council recommended

resolution, which was adopted, changing the By-Laws so as to extend the limit of membership from one hundred to one hundred and fifty members.

Before the reading of the next paper, Dr. H. O. Marcy, of Boston, demonstrated the *tendons in the tail of the opossum*, and spoke of their superiority over cat-gut, being stronger and smoother, and remaining longer.

Venomous Serpents of the United States, and the Treatment of Wounds Inflicted by Them.

Dr. Paul B. Barringer of the University of Virginia, treated this subject in a most interesting and instructive manner. His classification of reptiles is as follows:

Colubrine—harmless.

Elapidæ—a single poisonous species.

Crotaline	{	Rattlesnake, two genera.
		Copperhead, two species.
		Water moccasin, one species.

Lizards—one specimen—Gila monster.

Dr. Barringer gave a brief review of the venomous reptiles of the United States, an allusion to some popularly supposed to be venomous, but not so; the demonstration that the Bead snake or Harlequin snake of the South (*elape fulvius*) should be added to our dangerous class, with report of death from its bite; the consideration of the three different types of venomous apparatus met with among American snakes; a study of the properties of venom, a demonstration from experimental research, that the bacterial infection of such wounds is not due to bacteria in the venom, as claimed, but is from the saliva of the snake. There are no bacteria in the venom. The author did find, however, during his investigation, a colony of living nematode worm in the venom sack of a living *Crotalus*. A review of a large series of statistics bearing on the fatality of different serpents, went to show that a bite from most of the American venomous serpents is not a very serious affair. Treatment was next given, laying stress upon the internal administration of strychnia and the application of modern antiseptic methods to the wound of Crotaline snakes. Four more cases of death were reported from the bite of the Gila monster of Arizona.

Dr. Geo. Ben. Johnston, of Richmond, Va., followed with a paper on

Imperforation of the Rectum.

He spoke of the various kinds of imperforation and their causes, and exhibited an infant upon whom he had performed an inguinal colotomy for this deformity. The stitches were removed on the seventh day. The operation was thoroughly successful, and the child is doing well.

Dr. H. O. Marcy, of Boston, Mass., has operated three times, and put on record an unpublished case. He first stitched the bowel to the external margin of the skin.

A Case of Induced Abortion for Relief of Nausea and Vomiting with Remarks.

Dr. Christopher Tompkins, of Richmond, Va., stated that he reported this case because the patient died. She was 24 years old, and was three and a half months pregnant with her first child. She had previously suffered a sprain of the ankle, and been confined for several weeks. Nausea and vomiting, which set in from the first, reduced her to such an extent that, after consultation, it was decided to produce abortion. The use of the probe was followed by the flow of some water. Sea-tangle tampons and Barnes' bags were used. The fœtus and membranes were removed with the placental forceps. At first there was a tendency to rally, and the nausea and vomiting were much relieved. Death, however, followed, the patient sinking from exhaustion. He wants the idea banished that abortion, skilfully induced, is always safe. He now uses metal dilators instead of tents, and completes the operation at one sitting.

Officers elected for ensuing term are—

President—Dr. J. McFadden Gaston, of Atlanta, Ga.

Vice-Presidents—Dr. C. Kollock, of Cheraw, S. C., and Geo. Ben. Johnston, of Richmond, Va.

Dr. W. E. B. Davis, of Birmingham, Ala., remains *Secretary*.

Dr. Hunter McGuire, of Richmond, Va., was elected to take the place of Dr. Wm. T. Briggs as a member of the Council.

Dr. Lewis S. McMurtry, of Louisville, Ky., was elected Chairman of the Committee of Arrangements for the next Annual Meeting in Louisville, Ky., second Tuesday in November, 1892.

Dr. Gaston was installed President of the Association, and the Session adjourned.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The Second Semi-annual meeting of the Seventh Annual Session of the Medical Examining Board of Virginia was held in the Rooms of the Y. M. C. A. building, Lynchburg, Va., October 6th, 7th, and 8th, 1891.

The first meeting was called to order at 8 P. M., Tuesday, October 6th, by the President, Dr. Hugh M. Taylor of Richmond, Va.

The following members answered to the roll call :

Drs. Brown, Chancellor, Clarke, Conway, Dillard, Green, Greer, Glasgow, Harrison, Hubbard, Hicks, Irving, Martin, Meriwether, Nash, Robinson, Hugh M. Taylor, T. James Taylor, and Young.

The remainder of the evening was spent in consideration of routine work, disposing of correspondences, and in fixing upon the questions to be adopted for examinations in the several branches, to begin to-morrow at 9 A. M.

CHIEF FEATURES OF THE MEDICAL EXAMINERS' LAW.

As there are many interested parties who are yet uninformed, or else misunderstand the effect of the law regulating the practice of medicine, etc., in Virginia, we give a resumé of the requirements.

The Medical Examining Board of Virginia went into effect January 1st, 1885. Any one having had a duly accredited license to practice medicine or surgery in his State prior to that date, and who furnishes satisfactory evidence that he was so licensed, is exempt from the operations of the Virginia Medical Examiners' law. But any other party who, since January 1st, 1885, undertakes to practice medicine, surgery, etc., in Virginia for compensation or reward, without first having received a duly issued certificate of having passed a satisfactory examination before the Medical Examining Board of Virginia, and then having his name "registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside," is practising illegally; and on conviction before any of the courts of the Commonwealth, shall be fined "not less than \$50 nor more than \$100 for each offence, and shall be debarred from receiving any compensation for services rendered as such physician or surgeon."

All candidates for examination for license shall appear before the Medical Examining Board of Virginia during one or the other of the semi-annual meetings. One of these

meetings occurs about the middle of spring of each year in the city of Richmond, and the other is held during the fall of each year—thus far invariably at the places and during the period of annual sessions of the Medical Society of Virginia.

Provision, however, is made for cases of emergency; but the claim of "emergency" must be decided by the President of the Board, after due inquiry into all the facts upon which the claim of emergency is based. If the claim of emergency is sustained by the President, then he shall appoint three members of the Board to assemble at a given place and time, where and when the three members shall organize themselves into a committee, and, *in session*, examine the candidate or candidates for license, and pass upon the examination paper or papers as if the Board were in full session.

PLAN OF EXAMINATION.

Applicants for examination must be on hand from the beginning hour of the examination in each of the eight sections, and must not leave the examining-room until he has handed in his paper relative to the section questions then upon the blackboard. Three hours are allowed for examination in each section; but the effort is made to so arrange the questions that they may be perfectly answered in about half that length of time.

All examinations are conducted in writing.

Any party wishing to be examined should come prepared with the examination fee of *five dollars*, required by law, and report immediately to the Secretary of the Board, who will be in the hall *half an hour* before the appointed time, to issue in due form the certificates for examination.

Each candidate will have a desk or table assigned him by number, and he is expected to occupy only that desk during the examination.

Candidates are not allowed, during the progress of examination, to communicate with each other verbally, or by note or sign. Visitors will not be allowed in the hall during the examination, except by official invitation of the Board, and under no circumstances will they be permitted to communicate with, or interrupt the candidates during the time of the examination.

Candidates, in turning in their papers to the respective Chairmen of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which

numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers, as returned by the candidates, examined and marked by the respective Section Examiners.

The applicant is required to answer at least three-fourths of the questions satisfactorily; and he is to be rejected if he fails to answer satisfactorily thirty-three and one-third per cent. of the questions in any one section or sub-division of the whole examination.

The *officers of the Board* are:

President—Dr. Hugh M. Taylor, of Richmond, Va.

Secretary and Treasurer—Dr. Paulus A. Irving, of Farmville, Va.

Legislative Committee—Drs. Rawley W. Martin, of Chat-ham, Wm. P. McGuire, of Winchester, and Benjamin Harrison, of Richmond, Va.

Executive Committee—Drs. Wm. L. Robinson, of Danville, Herbert M. Nash, of Norfolk; Robert Glasgow, of Lexington, and the President and Secretary, *ex-officio*.

The First Semi-annual Meeting of the Eighth Annual Session of the Board will be held in Richmond, Va., about April 21st, 1892.

The following Examination Questions, after full discussion by the Board, were adopted:

Examinations October 7th and 8th, 1891.

I.—SECTION ON CHEMISTRY.

Members:—Drs. P. B. Green,* of Wytheville, *Chairman*; A. C. Palmer, of Norfolk; Benj. Harrison,* of Richmond city, and T. O. Jones, of Harrisonburg.

Ques. 1. Define acids, bases and salts, giving an example of each.

Ques. 2. How are hydrates formed? Name several examples, with properties of each.

Ques. 3. Give in detail the mode of preparing nitrogen. State its properties.

Ques. 4. Give a short history of phosphorus, with a test for its detection in organic matter.

Ques. 5. Having the three powders—morphia, quinia and strychnia—how would you distinguish them chemically?

Ques. 6. Define the terms, alcohols, ethers and aldehydes, naming one of each.

* The * after names indicate that the parties were in attendance.

II.—SECTION ON ANATOMY.

Members:—Drs. Hugh M. Taylor,* of Richmond, *Chairman*; Wm. P. McGuire, of Winchester; R. D. Huf-
fard,* of Chatham Hill, and Paulus A. Irving,* of
Farmville.

Ques. 1. Describe the first rib.

Ques. 2. Describe the third portion of the subclavian ar-
tery and its relations.

Ques. 3. Describe the thoracic duct.

Ques. 4. Give general and descriptive anatomy of the
spermatic cord.

Ques. 5. Name origin and exit of the cranial nerves.

Ques. 6. Describe the dura mater.

III.—SECTION ON (I) HYGIENE AND (II) MEDICAL JURISPRU-
DENCE.

Members:—Drs. O. B. Finney, of Onancock, *Chairman*;
T. B. Greer, of Rocky Mount; J. E. Chancellor,* of
Charlottesville; and James W. Tankard, of Burgess'
Store.

I.—*Hygiene.*

Ques. 1. In a malarial district, what hours of the twenty-
four is the poison most active, and by what precautions
could you avoid most of the dangers of malarial poison?

Ques. 2. Give the diseases against which quarantine is
enforced, and state the length of time necessary in each
case.

Ques. 3. How would you disinfect a room and contents,
contaminated by a contagious disease, and a body dead of
same?

II.—*Medical Jurisprudence.*

Ques. 1. What is tyrotoxon? In what articles of food
is it usually developed? Give the symptoms induced when
taken into the stomach.

Ques. 2. Name the different modes of death, and give the
signs in the order of their importance.

Ques. 3. Describe the physical, chemical, and microscopic
characters of blood-stain, found on fabrics, wood, and cutting
instruments.

IV.—SECTION ON PHYSIOLOGY.

Members:—Drs. Robert Glasgow,* of Lexington; *Chairman*;
R. F. Young,* of Love's Mills; John W. Dillard,* of
Lynchburg; and Wm. S. Christian, of Urbanna.

Ques. 1. What is animal heat? State in detail from what
source it is derived.

Ques. 2. Give the histology of valvulæ conniventes and villi of small intestines.

Ques. 3. Give the function of the membrana tympani, and that of the Eustachian tube.

Ques. 4. Give distribution and function of the ophthalmic branch of the trigeminal nerve.

Ques. 5. Describe the cerebellum and give its physiological function.

Ques. 6. Give the physiological properties of urine—its normal variation as to quantity, acidity, and specific gravity.

V.—SECTION ON MATERIA MEDICA AND THERAPEUTICS.

*Members:—*Drs. C. C. Conway,* of Rapidan, *Chairman*; A. Trent Clarke,* of South Boston; S. W. Budd, of Petersburg; James Parrish, of Portsmouth; and M. A. Douglass (Homœop.) of Danville.

Ques. 1. Name the principal mineral acids. Give the doses and therapeutic properties of each.

Ques. 2. State the therapeutic uses of oil of turpentine, and write a formula for its emulsion.

Ques. 3. Mention the various methods for the administration of mercury. Name the principal preparations and doses of each.

Ques. 4. State the physiological effects and therapeutic uses of water.

Ques. 5. Name the chief cerebral stimulants, and the contra-indications for their use.

Ques. 6. Name the preparations of iron in common use—their therapeutic uses, and how best administered.

Ques. 7. Name three of the most active cathartics—whence derived, and dose of each.

Ques. 8. Name the most efficient antiperiodics, and the best time for their administration.

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

*Members:—*Drs. Herbert M. Nash,* of Norfolk, *Chairman*; B. L. Winston, of Hanover C. H.; G. D. Meriwether,* of Buena Vista; H. M. Patterson, of Staunton; and George A. Tabor (Homœop.), of Richmond city.

Ques. 1. What are the characteristics of the two fontanelles, and their diagnostic value?

Ques. 2. What are deemed the causes, and describe the mechanism of labor in face presentations?

Ques. 3. What circumstances may render version necessary? State the most approved method of performing podalic version.

Ques. 4. Give the management of the third stage of labor.

Ques. 5. Mention the most approved methods of preventing septic infection after labor and during abortion.

Ques. 6. In what should the treatment of retroversion, with adhesions, differ from that of simple retroversion?

VII.—SECTION ON PRACTICE OF MEDICINE.

Members:—Drs. Rawley W. Martin,* of Chatham, *Chairman*; Bedford Brown,* of Alexandria; R. I. Hicks,* of Warrenton; T. James Taylor,* of Walthall's Store; and W. P. Jones (Homœop.), of Petersburg.

Ques. 1. Give the constructive diagnosis of hydrothorax.

Ques. 2. Differentiate cerebro-spinal meningitis from tubercular meningitis.

Ques. 3. State the causes of acute pericarditis.

Ques. 4. State the causes of ascites.

Ques. 5. Describe the morbid anatomy of ulcer of the stomach.

Ques. 6. Give the symptoms of pulmonary phthisis—stage of incomplete consolidation.

Ques. 7. Give the treatment of diabetes.

Ques. 8. Give the treatment of acute articular rheumatism.

VIII.—SECTION ON SURGERY.

Members:—Drs. Wm. L. Robinson,* of Danville, *Chairman*; Leigh Buckner, of Roanoke; Jacob Michaux, of Richmond city; Kent Black, of Blacksburg; and F. Webster, (Homœop.), of Norfolk.

Ques. 1. Causes of gangrene.

Ques. 2. Symptoms of coxalgia.

Ques. 3. Diagnosis of appendicitis.

Ques. 4. Describe operation for strangulated femoral hernia.

Ques. 5. Describe amputation of ankle-joint, choosing method preferred.

Ques. 6. Describe the dangers incident to the introduction of the catheter.

MEMBERS OF THE MEDICAL EXAMINING BOARD OF VIRGINIA,
CONSTITUTED NOVEMBER 20TH, 1891.

Dr. Bedford Brown,	..	..	..	Alexandria, Va.
" Kent Black,	..	..	..	Blacksburg, Va.
" Leigh Buckner,	..	..	..	Roanoke, Va.
" S. W. Budd,	..	..	..	Petersburg, Va.
" J. E. Chancellor,	..	..	..	University of Virginia.
" A. Trent Clarke,	..	..	..	South Boston, Va.
" C. C. Conway,	..	..	..	Rapidan, Va.
" Wm. S. Christian,	..	..	..	Urbanna, Va.
" J. W. Dillard,	..	..	..	Lynchburg, Va.
" M. A. Douglass,	..	..	..	Danville, Va.
" O. B. Finney,	..	..	..	Onancock, Va.
" Robt. Glasgow,	..	..	..	Lexington, Va.
" P. B. Green,	..	..	..	Wytheville, Va.
" T. B. Greer,	..	..	..	Rocky Mount, Va.
" R. B. Huffard,	..	..	..	Chatham Hill, Va.
" Benjamin Harrison,	..	..	..	Richmond, Va.
" R. I. Hicks,	..	..	..	Warrenton, Va.
" Paulus A. Irving,	..	..	..	Farmville, Va.
" T. O. Jones,	..	..	..	Harrisonburg, Va.
" W. P. Jones,	..	..	..	Petersburg, Va.
" Rawley W. Martin,	..	..	..	Chatham, Va.
" Wm. P. McGuire,	..	..	..	Winchester, Va.
" G. D. Meriwether,	..	..	..	Buena Vista, Va.
" Jacob Michaux,	..	..	..	Richmond, Va.
" Herbert M. Nash,	..	..	..	Norfolk, Va.
" A. C. Palmer,	..	..	..	Norfolk, Va.
" Henry M. Patterson,	..	..	..	Staunton, Va.
" James Parrish,	..	..	..	Portsmouth, Va.
" Wm. L. Robinson,	..	..	..	Danville, Va.
" Geo. A. Taber,	..	..	..	Richmond, Va.
" Jas. W. Tankard,	..	..	..	Burgess' Store, Va.
" T. James Taylor,	..	..	..	Walthall's Store, Va.
" Hugh M. Taylor,	..	..	..	Richmond, Va.
" F. Webster,	..	..	..	Norfolk, Va.
" B. L. Winston,	..	..	..	Hanover C. H., Va.
" R. F. Young,	..	..	..	St. Clair's Bottom, Va.

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO WHOM
 LICENSES WERE GRANTED TO PRACTICE MEDICINE IN VIRGINIA, AFTER DUE
 EXAMINATION, OCTOBER 7TH AND 8TH, 1891, WITH THEIR POST-OFFICES,
 COLLEGES, AND YEARS OF GRADUATION.

<i>Name.</i>	<i>Post-Office.</i>	<i>College of Graduation.</i>	<i>Year</i>
Dr. J. W. Austin.....	Cuffee, Va.....	Baltimore Med. College.....	1891
" John W. Branham.....	Kempsville, Va.....	Col. Phys. & Surg., Balt.....	1889
" James H. Browning.....	Simeon, Va.....	University of Virginia.....	1891
" C. W. Callan.....	Shen. Alum Springs, Va.....	Baltimore Med. College.....	1891
" Robt. E. Dixon.....	Bristol. Tenn.....	University of Virginia.....	1891
" C. Gray Dold.....	Lexington, Va.....	University of Maryland.....	1891
" Hume Feild.....	San Marino, Va.....	Med. College of Virginia.....	1891
" H. F. Gamble (colored.....	Charlottesville, Va.....	Yale Med. College.....	1891
" Chas. P. Garland.....	Hampden Sidney, Va.....	Hosp. Col. Med., Louisville.....	1891
" Robt. R. Grant.....	Lynchburg, Va.....	Univ. City of N. Y.....	1891
" Wm. M. Halman.....	Lee, Va	Med. College of Virginia.....	1889
" Edw. M. Hardcastle.....	Trappe, Talbott Co., Md.....	University of Maryland.....	1889
" Wm. F. Holland.....	Holland's, Va.....	Med. College of Virginia.....	1891
" J. E. Hubble.....	Holstein Mills, Va.....	University of Virginia.....	1891
" Wirt P. Marks.....	Garysville, Va.....	Tulane University.....	1891
" Stuart McGuire.....	Richmond, Va.....	University of Virginia.....	1891
" R. L. McMurran.....	Portsmouth, Va.....	Jefferson Med. College.....	1890
" C. H. Saunders.....	Chase City, Va.....	Col. Phys. & Surg., Balt.....	1891
" J. M. Shackelford.....	Irisburg, Va.....	Baltimore Med. College.....	1891
" C. M. Vaiden.....	Ruthville, Va.....	Med. College of Va.....	1891

AT A SPECIAL MEETING, HELD SINCE THE ABOVE:

Dr. Jerry F. Lucas (col'd)...	Petersburg, Va.....	Harv. Univ., Wash., D. C.....	1889
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STANDING IN EACH SECTION OF THE APPLICANTS REJECTED OCTOBER 7TH AND 8TH, 1891,
AND THE COLLEGES FROM WHICH THEY RECEIVED DIPLOMAS.

The standard of requirements for license is an average mark of 75 per cent. on the whole. If, however, an applicant receives less than 33½ per cent. in any one of the eight Sections, he is rejected.

Nos. of examination papers.	INSTITUTIONS OF GRADUATION.												Remarks.
		Chemistry.	Anatomy.	Hygiene and Med. Jurisprudence.	Physiology.	Materia Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.	Average.		
2	Baltimore Medical College.....	38	33 $\frac{1}{2}$	25	60	75	88	75	59	453	56	.....
11	Long Island College Hospital, N. Y.....	38	65	75	58	77	82	75	61	581	66	.....
12	Louisville Medical College.....	35	37	78	76	64	80	87 $\frac{1}{2}$	70	527	65	.....
13	University of Louisville, Ky.....	54	65	70	65	67	75	50	58	504	63	.....
14	Non-Graduate.....	43	30	71	25	57	75	40	34	375	46	.....
15	Non-Graduate.....	45	75	85	75	80	72	75	60	567	70	.....
23	University of Maryland.....	55	55	90	67	65	75	87	70	564	70	.....
24	Medical College of Virginia.....	37	60	76	75	75	86	85	60	554	69	.....
26	Non-Graduate.....	65	24	69	33	75	75	66	50	457	57	.....
30	College Physicians and Surgeons, N. Y.....	40	54	80	70	63	89	75 $\frac{1}{2}$	75	546	68	.....
32	University of City of New York.....	70	42	58	40	85	85	75	75	560	70	.....

INSTITUTION- REPRESENTED BY THE APPLICANTS WHO CAME BEFORE THE MEDICAL EXAMINING BOARD OF VIRGINIA, IN SESSION IN LYNCHBURG, VA., October 7th and 8th, 1891.					
	Total Number Applicants from each College.	Total number Applicants Licensed.	Total Number Applicants Rejected.	Withdrawals.	
Baltimore Medical College.....	4	3	1		
Jefferson Medical College.....	1	1			
College Physicians and Surgeons, Baltimore.....	2	2			
Hospital College of Medicine, Louisville, Ky.....	1	1			
University of Virginia.....	4	4			
Long Island College Hospital, New York.....	1		1		
Louisville Medical College.....	1		1		
University of Louisville, Kentucky.....	1	2	1		
University of Maryland.....	3		1		
Yale Medical College.....	1	1			
Tulane University, Louisiana.....	1	1			
Howard University, Washington, D. C.....	1	1			
Medical college of Virginia.....	5	4	1		
College Physicians and Surgeons, New York.....	1	1	1		
University City of New York.....	2	1	1		
Non-Graduates.....	3		3		
Total.....	32	21	11		

INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

January 1st, 1885, to October 8th, 1891.

	Total number of applicants for examination from each institution.	Total number awarded certificate on first examination.	Total number rejected on first examination.	Rejected applicants appearing for exam'n 2d time.	Certificates awarded on 2d examination.	Rejected 2d time.	Rejected applicants appearing for exam'n 3d time.	Rejected 3d time.	Incomplete examinations, withdrawn or otherwise.
Medical College of Virginia.....	89	71	14	5	4	1			4
University of Virginia—Medical Department.....	57	56	1						
College of Physicians and Surgeons, Baltimore, Md.....	57	38	17	6	4	2			2
Washington University, Baltimore, (Extinct).....	1								1
University of Maryland—Medical Department, Baltimore.....	74	52	22	4	2	2	1	1	
Baltimore Medical College, Maryland.....	11	3	6						2
Baltimore University—School of Medicine.....	4	4	1			1			
Jefferson Medical College, Philadelphia, Penn.....	28	18	10	2	2				
University of Pennsylvania, Medical Department, Philadelphia.....	4	4							
Medico Chirurgical College, Philadelphia, Penn.....	1	1	1	1		1	1	1	
Woman's Medical College of Pennsylvania, Philadelphia.....	1	1							
Hahnemann Homoeopathic Medical College, Philadelphia, Penn.....	2	2							
Bellevue Hospital Medical College, New York.....	11	10	1	1	1				
University of the City of New York—Medical Department.....	20	14	6	1		1			
College of Physicians and Surgeons, New York.....	6	5	1						
Geneva Medical College, New York.....	1	1							
National Medical College, Washington, D. C.....	1	1							
University of Georgetown, D. C., Medical Department.....	1	1							
Howard University, Med. Department, Washington, D.C.(colored).....	17	3	14	4		4	1	1	
Louisville Medical College, Kentucky.....	7	1	6						
Hospital Medical College, Louisville, Ky.....	7	4	3						
Kentucky School of Medicine, Louisville.....	2	2							
University of Louisville, Ky., Medical Department.....	5	2	3						
University of Tennessee—Medical Department, Nashville.....	1	1							
Vanderbilt University—Medical Department, Nashville, Tenn.....	3	2	1	1	1				
Detroit Medical College, Michigan.....	2	1	1	1	1				
University of Michigan—Medical Department, Ann Arbor.....	2	2							
St. Louis Medical College, Missouri.....	1	1							
Columbus Medical College, Ohio.....	3	1	2	1	1				
Cincinnati Medical College, Ohio.....	1	1	1						
Cleveland Homoeopathic Hospital Medical College, Ohio.....	2	2							
Miami College, Cincinnati, Ohio.....	1	1							
Leonard Medical College, Raleigh, N. C., (colored).....	7	5	2						
Medical College, State of South Carolina, Charleston.....	1	1	1	1	1				
University of Vermont, Burlington.....	1	1							
Heidelberg, Germany.....	1	1							
College of Physicians and Surgeons, Columbia, New York.....	1	1							
Georgetown College, Washington, D. C.....	1	1							
University of Virginia and New York.....	1	1							
Southern Medical College, Atlanta, Georgia.....	2	2							
Atlanta Medical College.....	1	1							
University of New York.....	1	1							
Chicago Homoeopathic Medical College.....	1	1							
St George Hospital, London, England.....	1	1							
King George Hospital, London, England.....	1	1							
King College, London, England.....	1	1							
University of Va. and Bellevue Hospital Medical College, N. Y.....	1	1							
Tulane University—Medical Department.....	1	1							
University of Maryland and Baltimore Medical College.....	1	1							
Long Island College Hospital, New York.....	1	1							
Yale Medical College.....	1	1							
University of Louisiana.....	1	1							
Colleges unknown.....	6	4	1						1
Non-Graduates.....	37	12	20	1		1			5
Totals.....	493	330	148	30	17	13	3	3	15

Book Notices.

Practical Work in School-Room. Part I. A Transcript of the Object Lessons on the Human Body. Given in Primary Department Grammar School, New York City. Pupil's Edition. Revised. New York; A. Lovell & Co. Cloth. 12mo. Pp. 107.

No name is given as the author of this book. Probably he is ashamed of it—and well he may be—so far, at least, as the 30-odd pages that relate to alcohol, tobacco, opium, etc., are concerned. All this part of the book is the purest nonsense that we have seen in a work that undertakes to teach the truth. The author cannot be a more earnest temperance worker than the writer of this notice. But if the temperance cause is to have only such friends as this book, then earnestly does the prayer go up, “Good Lord, deliver us from our friends.”

The Book of Physiology. By M. FOSTER, M. A., M. D., LL. D., F. R. S., Professor of Physiology in University of Cambridge, etc. Fourth American, from Fifth English Edition. Thorough Revised. With Notes, Additions, and 282 Illustrations. Philadelphia: Lea Brothers & Co. 1891. 8vo. Pp. 1072. Cloth, \$4.50; Leather, \$5.50. (From Publishers.)

This standard, and now almost universally adopted, text-book on Physiology in English-speaking countries comes out in its present edition so thoroughly revised and improved in every point as to compel its purchase by those who have former editions or who have been relying on the works of former authors as their text authority. It appears as if the author were specially conversant with the practical wants of the physician; so that on almost every page there is a sort of clinical direction or suggestion given to physiological facts, which makes this truly the *practitioner's text-book* of Physiology.

Hand-Book of Materia Medica, Pharmacy, and Therapeutics. By SAMUEL O. L. POTTER, A. M., M. D., M. R. C. P. London. Professor of Theory and Practice of Medicine, Cooper Medical College, San Francisco, etc. Third Edition. Revised. Philadelphia: P. Blakiston, Son & Co. 1891. 8vo. Pp. 767. Cloth, \$4; Leather, \$5. (For sale by Hunter & Co., Richmond.)

This Hand-Book includes description of “the physiologi-

cal action of drugs, the special therapeutics of disease, official and practical pharmacy, and minute directions for prescription writing." It is the one book that the practitioner should keep on his office desk, as it concisely furnishes him with details and suggestions as to composition, doses, and uses of medicines, and then points out for specific diseases or morbid states their appropriate remedies. The well-arranged index is a great help to quickly find the item desired. The practitioner should not be without this book.

Saunders' Question Compends. (I) Essentials of Anatomy, and Manual of Practical Dissection, together with the Anatomy of the Viscera. By CHARLES B. NANCREDE, M. D., Professor of Surgery and of Clinical Surgery, University of Michigan, Ann Arbor, etc. Fourth Edition. Revised and Enlarged by an Appendix, containing *Hints on Dissection*, by J. CHALMERS DA COSTA, M. D. Based upon the Last Edition of "Gray's Anatomy." 30 Handsome Full-Page Lithographic Plates in Colors. 188 Fine Wood Cuts. Pp. 388. Price, net, in Cloth, \$2; in Sheep, \$2.—**(II) Essentials of Physiology.** By H. A. HARE, B. Sc., M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College of Philadelphia, etc. Third Edition. Thoroughly Revised and Enlarged by the Addition of a Series of Handsome Plate Illustrations, taken from the Celebrated "Icones Nervorum Capitis," of Arnold. Pp. 193. Price, net, in Cloth, \$1.—**(III) Essentials of Bacteriology.** Being a Concise and Systematic Introduction to the Study of Micro-Organisms. By N. V. BALL, M. D., Assistant in Microscopy, Niagara University, Buffalo, N. Y. With 77 Illustrations—some in Colors. Pp. 159. Price, net, in Cloth, \$1.—**(IV) Essentials of Nervous Diseases and Insanity: Their Symptoms and Treatment.** By JNO. C. SHAW, M. D., Clinical Professor of Diseases of the Mind and Nervous System, L. I. College Hospital, Brooklyn, N. Y., etc. Forty-eight Original Illustrations, mostly selected from the Author's Private Practice. Pp. 194. Price, net, \$1.

Each of these four "Essentials" is published and for sale by Hr. Wm. B. Saunders, Philadelphia, Pa. They represent the statements of the best authors, in their standard works, boiled down to the most concise forms of expression. Indeed, they are so complete as to set one to studying what more could be said. The titles, etc., are given so fully above as in great part to be descriptive of the respective works.

Editorial.

Visiting Lists for 1892.

Lindsay & Blakiston's Physicians' Visiting List for 1892 is the 41st annual publication—in four editions. The “regular edition” is in five styles, suitable for from 25 to 100 patients a day or week; price, from \$1 to \$3. “Illustrated edition,” three styles; \$1.25 to \$3. “Perpetual edition”—same as “regular edition,” but without dates, two sizes, \$1.25 to \$1.50. “Monthly edition,” requiring name of patient to be written but once a month, and can be commenced at any time; 75 cents and \$1, according to binding, etc. All styles except the 75 cents have pockets, a pencil, etc. Messrs. P. Blakiston, Son & Co., Philadelphia, Pa., Publishers.

The Medical News Visiting List for 1892, is published by Messrs. Lea Brothers & Co., of Philadelphia, Pa., in four styles. Weekly dated, for 30 patients; monthly, undated, for 120 patients a month; perpetual, undated, for 30 patients a week; and perpetual, undated, for 60 patients a week, without text, but with 256 pages of blanks. The first three styles contain 32 pages of text (emergency memoranda, etc.), and 176 pages blank. Each style is in flexible leather binding, and has pocket, pencil, etc. Price in any style, \$1.25; thumb-letter index, 25 cents extra.

The Weekly Medical Review Pocket Reference Book and Visiting List—Perpetual, published by Messrs. J. H. Chambers & Co., St. Louis, Mo., has 25 pages valuable printed matter, including calendars for 1892 and 1893, and about 135 pages blank. Bound in leather, with pocket, etc. Price, 75 cents.

Corrections in Table, November, No. 1891.

In the “Table of Cases of Early Viability,” in the paper by Dr. Llewellyn Eliot, pages 619–624 inclusive, make the following corrections: No. 4—Page 455, not 445. No. 16—3 oz., not 3½; 11 inches, not 11½ inches; strike out “Cried. Last menstruation April 4th, delivered September, 3rd.” No. 37—Jardini should be Jardine. No. 43—Mini should be Mem. No. 52—January 9th, should be January 19th. No. 99—Buchaltz should be Bucholtz. No. 101—Ducas should be Ducos. No. 107—Strike out “p. 68.” No. 116—Strike out “do,” and insert “p. 168” No. 120—Local should be Tocol. No. 123—Bailley should be Baillie. No. 142—P. 257, should be 267. No. 146—Arman should be Annan. No. 151—1881 should be 1887. No. 195—Local should be Tocol, and p. 99, should be p. 199. No. 197—1833–4, should be 1853–4.

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Original Communications.

ART. I.—Notes on Several Cases of Poisoning, with a Description of an Emergency and Antidote Case

By JOHN S. McLAIN, M. D., of Washington D. C.

In the opening lines of Dr. William Murrell's valuable little work, "What to do in Cases of Poisoning," he says: "If you have neglected to provide yourself with one (an antidote case or bag), lose as little time as possible in doing so."

I had neglected to do this very thing up to about a year ago, when I obtained from Messrs. Parke, Davis & Co. their important addition to the physician's armamentary, an "Emergency Case," and the value and assistance it has been to me during the last twelve months leads me to think that a description of the little box and its contents, for the benefit of those who may never have seen it, and a history of the following cases (lives, some of which were, I think, saved by the timely presence of the above-mentioned case) may be of some interest to the profession at large.

The Emergency and Antidote Case consists of a neat, handsomely finished walnut box, six by nine inches in size, and about three and one-half inches thick. It has a nickel

plated bar handle and slide catch of the same material. It opens "on the flat," as does the "Gladstone" valise, the side lying evenly upon whatever surface the case rests. Each side within is covered with a door upon hinges, the door being of the same material as the box. Printed directions of what will be found under each cover are pasted thereon. When closed, the case takes up but little room. When not in use, it rests upon the end of my office table nearest the door of entrance and exit, where it can be abruptly seized and carried off in an instant, with the pleasing conviction that, in any ordinary case of poisoning, I have with me almost every drug and remedy that can be needed, without losing valuable time in sending to the nearest chemist or drugstore.

As the case lies open, under the right hand flap when raised are displayed eight vials, containing the following articles, chemically pure, and in the order named:

First, solution of iron chloride; the second bottle containing calcined magnesia. When called to a case of arsenical poisoning, the contents of these two vials are to be added to a half teacupful of warm water, with gentle stirring. A precipitate, the hydrated oxide of iron, the chemical antidote to arsenic, is formed, which, when properly diluted, is administered to the patient. As the power for good of this preparation, the hydrated oxide, depends upon its being freshly prepared, it will be seen that the physician is far better armed, having the iron chloride and the magnesia by his side, than if he had to wait until the antidote, or its component parts, could be procured for him.

The third bottle contains P. D. & Co.'s "Chlor-Anodyne," an article of the nature of "Chlorodyne" (formula on the bottle), and said to be superior thereto. It is anodyne and anti-spasmodic, and is useful in hysteria, fright, shock, etc. The next has ergot, the normal liquid, useful for controlling internal hæmorrhages, relieving local congestions, and other purposes. The next, fox-glove, the normal liquid, a "cardiac tonic, and acting indirectly as a diuretic." The sixth

vial holds solution of iron sub-sulphate, U. S. P.; and the seventh, the toxicologist's sheet-anchor as an emetic, before apomorphia came into general use for that purpose, zinc sulphate. The last vial on this side holds the assayed tincture of opium, with the dose at ten minims. Each of these vials has its separate apartment, and below these is a space running the length of the box, in which can be placed additional bottles, a small cork-screw, a soft rubber catheter, or anything else of small size.

The left hand side of the case is arranged somewhat differently. The bottles above described are all of one size. Upon lifting the left hand cover are to be seen four large vials, two at either end of the case, and in the middle three smaller ones, the articles they contain being needed in smaller quantities, and the space thus saved being devoted to the hypodermic case and room for additional tubes of hypodermic tablets. The four large vials on this side contain "ethyl-bromide" (P., D. & Co.)—"A prompt anæsthetic when given by inhalation," and valuable in poisoning by strychnia; ammonia carbonate, calcium carbonate, precipitated, the "chemical antidote to several of the mineral acids, especially oxalic acid," and "compound cerebral sedative," a preparation of the same nature as bromidia, and valuable in nervous troubles and cases of over-indulgence in alcohol. The smaller vials contain tannic acid, for strychnia, tobacco poisoning, etc.; citrate of caffeine, for opium, morphia, etc.; and nitrite of amyl pearls, a most useful remedy where there is a comatose condition of the patient.

In addition to the above, which are furnished with the case, I also carry a bottle of saccharate of lime, for carbolic and oxalic acid poisoning, a small quantity of copper sulphate, which is recommended as the best emetic in cases of poisoning by phosphorus and its compounds, a bottle of essential oil of mustard for producing quick counter-irritation, and a one per cent. solution of nitro-glycerine in alcohol, for hypodermic use in the later stages of narcotic poi-

sonings, when the patient is unable to swallow brandy or whiskey—and sometimes when he is—two or three minims of this solution being equal, in stimulating effect, to a very large quantity of either the whiskey or brandy,

The hypodermic syringe I use is the usual one with “wings,” packed in an ordinary oblong leather-covered case, with two needles, and room for two or three tubes of tablets. Either in the hypodermic case, or in the space wherein it rests, I carry the following soluble hypodermic tablets, each in its separate tube:

Aconitine	gr. 1-120
Apomorphine muriate.....	gr. 1-10
Caffeine	gr. 1.
Digitaline, pure.....	gr. 1-100
Morphine sulphate.....	gr. 1-4
Morphine and atropine.....	gr. 1-4 and 1-150
Morphine sulphate	gr. 1-2
Pilocarpine muriate }	gr. 1-8
Sodii chloridii }	gr. 1-4
Physostigmine sulphate.....	gr. 1-100
Atropine sulphate	gr. 1-50
Atropine sulphate.....	gr. 1-100
Cocaine muriate.....	gr. 1-4
Hyoscyam, hydrobrom.....	gr. 1-100
Strychnine sulphate.....	gr. 1-100

Fourteen tubes in all. It will be observed that some of the tablets are duplicated, though in different doses, as “morphine 1-4 grain,” and “morphine 1-2.” When one is greatly hurried—the usual condition in this class of cases—it will be found a great deal more convenient to have the exact dose one requires than to have to manufacture it by addition or subtraction. The advantage of the soluble hypodermic tablet was never more apparent than here; the dose is exact, the solution is made when needed, and in a second almost it is fresh, and therefore to be depended upon, and the physician can carry “in the hollow of his hand” remedies that, were they prepared in the old-fashioned “perma-

nent solution," would require a medicine chest to themselves.

The Emergency and Antidote Case, with all the bottles fully charged and everything complete, weighs about three pounds. It is easily carried in one hand, or if both hands are occupied, can be slipped under the arm.

When called to a case of suspected poisoning besides the above, I take with me generally a battery, a stomach-pump and a No. 8 soft rubber catheter. The battery, the one recommended by Dr. Murrell, by the way, is the Appareil d'Induction Volta Faradique, de Gaiffe, à Paris. I can give no better description of it than that given by the above-named celebrated toxicologist: "It is a wonderful little instrument, and is so small that it can be carried in the breast pocket. It is ready for use in a moment, and there is nothing to spill and nothing to get out of order." It is in a flat mahogany box six by four inches, and can be strapped to the side of the antidote case, or carried in the same hand with it.

The "stomach pump" I use consists of about six feet of the best rubber tubing and a small tin funnel. With this there are no "flute keys" to get out of order, nor valves to dry up. It can be used not only to empty the stomach of its contents, but to wash it out afterwards, being made to act as a syphon; to introduce remedies and antidotes, and the stomach end of it being soft, it is less liable to injure that organ, or any protrusion it may come in contact with on its way down.

After having been in attendance upon a case of poisoning, when all is over, one way or the other, it is just as well to make a brief note of what may have occurred; the time the patient was first seen, his condition, any unusual circumstances about the case that may have aroused suspicion, and what means were taken for relief or cure. It is possible these may be never needed; but should the case become one of judicial inquiry, it will be found that memoranda taken at the time are to be depended on far more than the

recollections of the busy practitioner days or weeks afterwards.

We come now to report upon several cases of poisoning with various drugs which have occurred in my practice; and taking them in alphabetical order as to the poison administered, they were as follows:

CASE I.—*Acute Alcoholic Poisoning—Whiskey—Quantity, 16 Ounces—Taken for a Wager.*

December 17th.—Evening; was called to see James Taliferro, colored; waiter; age 26 years. Messenger, a policeman, said the man had attempted to drink two old-fashioned lager beer glasses full of whiskey, one after the other, on a wager. The terms and circumstances of this bet were rather interesting; if he succeeded in disposing of the contents of the two glasses, the other party to the wager was to foot the bill; if, however, James did not succeed in drinking all of it, then he was to pay the reckoning, and the other man was to drink what was left. As the whiskey was sold at the rate of five cents a glass, it can be imagined what kind of a tippie they had to contend with. James drank the full amount of the whiskey in the two glasses, and in a few moments, taking two or three tottering steps, sank to the floor in a stupor, from whence he was carried to his room, where I found him lying upon the floor in a state of coma, pupils largely dilated, lips blanched, body covered with cold perspiration, and stertorous breathing. The atmosphere of the small apartment was heavy with the fumes of alcohol from his breath, and from the ejecta of his stomach, which was spread on the floor all around him—his mother having made him drink several mug's full of hot mustard water before he sank into a state of complete insensibility, and this having provoked copious emesis. It was impossible to arouse him, though all the different methods were tried; a pint of warm coffee was given by enema, and repeated during the night; he was stripped to the waist and "flicked" with the wet ends of towels while being held upon his feet by two strong men, and the cold douche was used at intervals. Inhalations of stronger ammonia, and, later, amyl nitrite had no effect, and about 11 o'clock I left the house, giving directions to continue the treatment, with warm applications to the body after each administration of the cold douche, and hardly expected to find my patient alive at the next visit. The next morning, however, James

had so far recovered as to give a weak grunt when his name was shouted in his ear. No water having been passed by him during the night, the catheter was used, and a large quantity drawn off. This seemed to give him great and immediate relief; and after a few inhalations of ammonia, he regained partial consciousness. He continued to improve during the day, but complained of intense abdominal pains and inability to use his lower limbs, with great confusion of thought and ideas. About 8 P. M., there was a return of some of the worst symptoms of the night before; he lost consciousness, suddenly; had several convulsions, with hot head, full bounding pulse, and skin wet with perspiration. This condition, by degrees, yielded to appropriate treatment, and, later, he fell off into a quiet sleep which lasted most of the night. There was considerable nervousness and muscular twitching for some days afterwards, and a constant burning sensation located in the lower intestines; but these symptoms gradually improved, and six days after having swallowed the whiskey he was at work again.

This case is interesting in that while authorities, Subbotin, Perin, Lallemand and others, give the period of elimination at from 26 to 40 hours from the time of imbibition of a large quantity of spirit, the odor was distinctively discernible in the exhalations from this man's lungs at the end of the third day, and no doubt alcohol would have been found in the blood and urine much later, upon the theory that "So long as any surplus remains in the system the spirit circulates in the blood, and the tissues are bathed in a fluid containing it."—(P. James.)

CASE II.—*Arsenical Poisoning—Acute. Fowler's Solution. Quantity taken, Teaspoonful in water, by mistake.*

May 6th: 12 M. Returning to my office from a case of puerperal eclampsia, upon which I had been in attendance from 4 o'clock A. M., I was informed by Miss A., a near neighbor (the family patients of mine) had, a short time before, swallowed a teaspoonful of Fowler's solution by mistake. (An ignorant servant had been sent down stairs to bring up a teaspoonful of Jamaica ginger for the relief of colic, and brought, instead, the same quantity of Fowler's solution; she had mixed the article with water, all ready to be taken, and the mistake was not discovered until the mixture had been swallowed.)

When I reached the house some twenty minutes had elapsed since the poison had been administered. I found the young lady sitting by the side of the bath tub greatly distressed, nauseated, burning pain in the stomach, straining and retching, the matter vomited being small and presenting the peculiar tinge of bile. A hypodermic of apomorphia, gr: 1:10 was at once administered, which soon relieved the stomach of its contents. In the meantime, with the assistance of my friend, Dr. A. S., of this city, the hydrated oxide of iron was prepared, diluted, and given to the patient. The first dose, a tumblerful, was rejected by the stomach, but she succeeded in retaining the next and subsequent doses, given in the same quantity, only occasionally vomiting a small amount of the mixture, until the pain in the stomach lessened. Faintness and depression coming on at this time, she was removed to bed and one drop of the foxglove, normal liquid, was given in water, with warmth to the extremities and stimulants freely administered. Under this treatment the pulse soon rallied. During the rest of the day there was considerable thirst and suffering from dryness and a sense of constriction in the throat, but little disturbance of the stomach followed. Morphia sulph. $\frac{1}{4}$ grain was given by hypodermic in the afternoon and repeated at bedtime, and she passed a fairly comfortable night. The day after there was some straining and purging while at stool, and for several days she complained of a sense of fullness and pain in the eyes, coldness of the cuticle, weakness and occasional cramp of the lower extremities, and, as she thought, partial loss of motion. All of these symptoms disappeared by degrees, and she made a good recovery under tonics.

The symptoms in this case were at no time serious, although painful—the former, I think, due to the prompt evacuation of the stomach and the copious administration of the chemical antidote to arsenic.

CASE III.—*Poisoning by Atropia Sulphate. Quantity taken, a little over one-fourth grain. "Eye-drops."—Teaspoonful of solution taken by mistake.*

Dr. Hughes Bennet, who presided over the deliberations of the Edinburgh Committee, reported that "(2) meconate of morphia does not act antidotally after a large dose of atropia." Be this as it may, there are undoubtedly "cases in which morphia may with advantage be made the cor-

rective of a full dose of atropia," as the following case, I think, goes to prove.

Mrs. B. was being treated by an oculist for a chronic affection of the eyes, and was using a solution of atropia, "a few drops in the eyes three times a day." At the same time she was taking for debility and enfeebled heart action a solution of the "cactina pellets" (*cereus grandiflora*) in dilute hydrochloric acid and water, "a teaspoonful after each meal." The solution of atropia was contained in a square one-ounce vial, the other solution in a square four-ounce bottle; both solutions were clear, but beyond this there was no similarity.

April 30th—Coming upstairs after dinner, Mrs. B., intending to take her dose of the cactina, picked up the small bottle containing the atropia, poured out a teaspoonful and swallowed it; immediately it flashed upon her what she had done, and the alarm was given. Dr. A., a physician in the immediate neighborhood, was summoned; he at once gave large quantities of strong mustard water and other emetics, and shortly afterwards I was telephoned for. When I reached the house I found Mrs. B. in a highly excited state, walking about the room in an aimless sort of way, crying and refusing to sit down or be comforted. There was a constant desire to drink water, heat and dryness of the mouth and fauces, difficulty and great pain in swallowing. Having frequently given this lady morphia hypodermically, in one-half grain doses, for various troubles (in fact, I had given her one the day before the accident occurred), and knowing the drug would quiet her, even if it had no effect as an antidote, I at once injected half a grain under the skin. Shortly afterwards, either from the effect of the morphia or the physiological action of the poison taken, or both, she complained of muscular weakness of the lower extremities—"her legs giving way under her"—and was persuaded to take a seat upon a sofa; being a very large woman, it was impossible, with the means at command, to move her, and she remained in the one position from half-past six to half-past eleven o'clock P. M. Drowsiness soon made its appearance, and it was with difficulty she could be kept awake. During these five hours she took by the mouth over two pints of strong, hot coffee, and considerable brandy. The characteristic rash of belladonna poisoning appeared upon the forehead and temples, at times almost entirely fading away, and again showing a deep dusky red. Mustard foot-baths were administered and sal volatile given con-

stantly by inhalation. There was no desire to micturate, nor was there any secretion of urine during the time. Between eleven and twelve o'clock at night she seemed to recover gradually from the semi-comatose condition she had been in for several hours, the rash faded for good, the pupils resumed their natural size and the sensibility to light returned. All present danger having passed, it was thought best to let her sleep, and accordingly she was undressed and put in bed, where she soon sank into a quiet slumber, Dr. A. kindly consenting to remain in the house all night. Towards morning she expressed a desire to void the urine, and within an hour the amount passed very nearly filled a large slop-jar. By nine o'clock A. M. the poison had been thus eliminated and Mrs. B. made a good recovery.

CASE IV.—*Poisoning by Atropia Sulphate. Quantity taken, one-half grain or over. "Eye-drops."*

Sunday, July 19th—The proprietor of a neighboring drug-store telephoned me that Mr. Samuel B., a man of probably sixty years of age, had several hours previously taken a large quantity of atropia and the physician in attendance desired my assistance. I reached the house about eleven thirty A. M. and learned that Mr. B. had taken the poison about half-past eight o'clock. It was not known exactly how much he had taken, but judging from the amount of the solution left in the bottle, it was supposed he had swallowed a quantity containing over half a grain. Several physicians in the neighborhood had been summoned but none had responded until ten A. M., when the young gentleman who was present had reached there. He applied restoratives, coffee injections, the battery, etc., but without apparent effect; the patient could not be aroused from the state of profound coma into which he had fallen soon after having swallowed the medicine. When I saw him he was stretched on his back on the bed in a state of complete muscular relaxation, the number of respirations had dropped to eight or nine in the minute, the breathing was stertorous and whistling, and could be heard all over the house. The skin was dry and harsh, there was a deep flush over the face and chest, and the pupils were widely dilated, eye-balls fixed and staring. Three pearls of amyl nitrite were broken and the contents given by inhalation, at intervals, mustard applied to the extremities, and the catheter was used, a small quantity only of urine being drawn off. There was no apparent response to treatment, and at one o'clock the progno-

sis was serious ; treatment was continued, however, and when seen at 3 P. M., there was some little amelioration of symptoms, the most favorable sign being a slight lessening of the rash. About a teacupful of water was drawn by catheter, and the patient made feeble motions of resistance when the instrument was introduced. Amyl nitrite was again given and the enema of coffee repeated. These remedies were applied continuously during the afternoon, a trained nurse having been secured in the meantime, and by seven P. M. there was considerable improvement in his condition ; the flush had faded, the kidneys were acting well, but the state of coma had given way to one of active delirium, the patient needing constant watching, as every few moments he would make an attempt to jump from the bed, presenting that peculiar form of belladonna delirium where the patient imagines some one is calling him and that he has to leave immediately.

At the suggestion of the family physician (who had been out of town during the day) to quiet the excitement and promote rest, a hypodermic of morphia, $\frac{1}{4}$ grain, was given at nine P. M., and the patient slept a portion of the night, the nurse using the catheter at intervals, with good results.

When seen next morning in consultation Mr. B. was still laboring under considerable excitement of mind, though his attention could be attracted by a direct question ; he would soon wander off, muttering to himself and making efforts to get up from the bed. The family physician took charge of the case from this time on, and in a few days the patient was himself again. He had no recollection of what had happened, and, when convalescing, thought he was recovering from a long attack of sickness.

CASE V.—*Poisoning by Chloral-Hydrate. Quantity taken, about Seventy Grains.* Recovering from a severe injury, and suffering considerably from insomnia, the wife of Mr. C. had prescribed for her (by a physician in another city), a solution of chloral-hydrate ; and without actually knowing what misery she was entailing upon herself, after entire recovery from the effect of the accident, she continued taking the drug until she had become a confirmed habitue ; a bottle containing fifteen grains of chloral to the teaspoonful of menstruum, could always be found upon the mantel in her sleeping apartment.

February 3rd.—Returning from “the club” rather late at night, and somewhat the worse for wear, Mr. C. entered the bed-room, stood by the mantelpiece for a moment, and

picking up the chloral bottle—before his wife could prevent him, or indeed, before she knew what he intended doing—poured what was left therein, considerably over an ounce, down his throat. As the medicine had no immediate effect, Mrs. C. did not allow herself to become alarmed, and it was nearly an hour afterwards, when her husband had fallen into a deep sleep from which she could not arouse him, that medical aid was summoned.

It was midnight when I reached the bedside: Mr. C. was lying all doubled up on the bed, as though he might have fallen thereon from complete loss of muscular power; he was sleeping heavily and entirely unconscious. We know that during the chloral sleep from an average dose, the patient may be awakened as easily as from a natural profound slumber. Such was not the case here; the sensibility to pain was entirely absent, as was evidenced by the fact that his wife, in her anxiety, was constantly giving vigorous tugs at his moustache and hair, which treatment had no awakening result. The surface of the body was cold, and the respirations sighing, and quite slow; the pulse was slow, but rather full, and there was some throbbing of the blood vessels; the face was swollen, bloated, and deeply flushed, the latter being probably due to the union of the alcohol and the chloral, as it has been observed that when these two articles are taken together in large quantities, this symptom is usually present, with more or less strong pulsation of the vessels.

The patient's body was straightened out, and hot water bottles applied to the extremities, with plenty of covering to raise the temperature if possible. An effort was made to empty the stomach with the stomach tube, but the respirations becoming slower and more shallow, it was thought best to discontinue the attempt (the medicine having been taken so long before, it was probably all absorbed previous to my reaching the house), and resort to artificial respiration. This was continued from time to time, inhalations of amyl nitrite being given in the meanwhile, and at 1:30 A. M., a hypodermic of strychnia sulphate, 1-100 was administered, and repeated at 2 o'clock. At 2:20, while giving an inhalation of amyl, I had the pleasure of seeing Mr. C. open his eyes gradually and look around. To keep him awake, an attempt was made to get him upon his feet, but when held in an upright position, I discovered the power of motion in his lower limbs to be entirely lost, the muscles being relaxed, and the limbs—for the time being—useless.

He was put back into the bed, and although there was still a tendency to drowsiness, he was easily kept awake until morning.

The paraplegia lasted for some days, and Mr. C. was compelled to keep his bed during the time, but it disappeared, and there were no other ill effects of the overdose.

CASE VI.—*Poisoning by Laudanum. Quantity taken, teaspoonful, given by mistake.* April 25th, 1 A. M. Was summoned to visit Mrs. W. The messenger, her husband, reported that his wife had been ill for some time with gastritis, and was under the care of the family physician, who had prescribed for her a mixture, and also a few drops of laudanum occasionally to allay pain. The medicines were in bottles of the same size, and stood together upon the bedside table, the idea never occurring to any member of the family that a mistake could be made. A short time before calling me the wife had awakened the husband, telling him it was the hour for her to take her mixture, and asking him to prepare it for her. Mr. W. half asleep, rose from the bed, picked up one of the bottles on the stand, poured a teaspoonful therefrom into a small medicine glass, and gave it to his wife, who immediately swallowed the contents. The peculiar odor and taste at once attracting her attention, she said she thought he must have given her the laudanum by mistake, and to turn up the light and see. He did so, found he had given a teaspoonful from the wrong bottle, and it was not many minutes before he was giving several rather strong pulls at my door bell.

When first seen, Mrs. W. was sitting up in bed in the preliminary stage of pleasurable mental excitement, with rapid pulse and flushed countenance. She knew she had taken an overdose of a powerful narcotic, and that the effects might be serious, and yet she was, apparently, the least troubled person about it in the room. This state rapidly gave way to a sense of weariness; she complained of her head beginning to ache, desired to be let alone that she might sleep; the face and lips became pale, and the pupils firmly contracted.

An emetic of strong mustard water was given, but it seemed impossible to make her take it in the manner required; she had an affection of the throat she said, and could not swallow rapidly, so twenty grains of zinc sulphate in water were given at one draught, and as no effect was produced, the dose was repeated in a short time. The second dose provoked emesis, and the act of vomiting

aroused her considerably. Immediately afterward a cup of strong coffee was given her to drink, but as she insisted upon sipping that in the same manner she had taken the mustard water, a pint of it was prepared, and much against her will, injected into the rectum, a grain of caffeine being injected under the skin at the same time.

The patient had a large family of sons and daughters, and as she was unable to walk, having been confined to her bed for several weeks, two members thereof were kept constantly employed—one on either side of the bed—in slapping, pinching, and shouting at her, and endeavoring by every means to keep her awake. Respiration growing labored and irregular, a hypodermic of atropine, 1-50 gr. was given, and repeated in thirty minutes with very good effect. Amyl nitrite and ammonia carbonate were also used freely. Treatment was active during the whole night and until 6 o'clock in the morning. At no time did she become completely unconscious. Had not the efforts to arouse her been unceasing, I think she would have become so, and possibly, the result might have been different, reduced as she was by previous disease.

The family physician arrived at the house shortly after the last-mentioned hour, and the case was turned over to him. The somnolent inclination continued for an hour or two, but by 9 o'clock A. M., eight hours after the medicine was administered, he considered her out of danger.

This was, without doubt, the most difficult case I have ever been called upon to treat, on account of the unwillingness, or inability of the patient to assist in the efforts made to save her life. There were no immediate untoward effects from the overdose, but Mrs. W. gradually failed, and three weeks afterwards died of the original disease, gastritis.

1924 N. Seventh street, N. W.

The attention of our readers is called to the advertisement of the Robinson-Pettet Co., which appears on page 28 of this issue. This house is one of long standing, and enjoys a reputation of the highest character. The preparations referred to, we commend specially to the notice of practitioners.

ART. II.—*Ophthalmia Neonatorum*.*

By FRANK TRESTER SMITH, A. M., M. D., of Chattanooga, Tenn.

PROFESSOR OF DISEASES OF THE EYE, CHATTANOOGA MEDICAL COLLEGE.

The importance of the subject is suggested by three facts:

1st. Of the number of blind in our asylums, a large per cent. of the blindness is produced by *ophthalmia neonatorum*.

2nd. The increase of the number of blind in the United States has been increasing in a greater ratio than the population.

3rd. Blindness from this cause is entirely preventable.

So important is this subject regarded in Europe that many of those countries have special legislation on the subject. This legislation generally provides that at the time the birth is registered a card is given the mother cautioning her about the danger of any discharge from the eye. Some laws require the midwives to report any redness or eye-discharge. To Dr. Howe, of New York, are we indebted for calling attention to the frequency of blindness, and the facts concerning its increase.

Since the introduction of Credé's method, the percentage of cases has been materially decreased in large lying-in hospitals. In his own service the decrease has been from 7.8 per cent. to 0.31 per cent.

The *cause* is generally conceded to be the introduction of the gonococcus at or soon after the time of birth.

The *prevention* is an easy matter, and is of most importance to us. During my service at the Emigrant Hospital, Ward's Island, New York, in the lying-in department, the vagina was douched with a sublimate solution (1-1000). As soon as the child was born, the eyes were washed with a solution of common salt in water, about 10 per cent. As a result, *ophthalmia neonatorum* was unknown in that institution during my service. One of the great difficulties here is the fact that many practitioners will never see a case in

* Read before the Chattanooga Medical Society.

the course of a large practice covering many years, and it is admitted that the danger is small in private practice; but as long as there is any danger at all, and the method of prevention so simple and so sure, would it not be well to adopt these measures in all cases? Credé's method is to instill into the conjunctival sac a few drops of 2 per cent. solution of nitrate of silver as soon as the child is born. This solution sometimes produced a considerable reaction, so that cold applications were used to lessen the inflammation, but this was rarely the case, and this inflammation never resulted disastrously. An application that would produce less reaction, and one that probably is as efficient, is the use of a solution of corrosive sublimate, 1-3000, used in the same manner.

The *diagnosis* of these cases is easy, and is made from the secretion. But we want to know more than this. It is of importance to know whether the cornea is involved or not, both for the treatment and for the prognosis. But right here we must not be too curious, for if we endeavor to inspect the cornea with a struggling child pressing the lids firmly together, we may exert enough pressure on the ball to break through the floor of an ulcer which has eaten its way to the membrane of Descemet. It is better to be satisfied with an unfinished diagnosis, and to treat the case as though there were corneal complications present, than to take any unnecessary risks.

The *prognosis* depends on the condition of the cornea. The danger is only from the involvement of the structure. As long as we can keep this free from ulceration, we have no fear of the result.

The *treatment* is one in which the authorities disagree in some particulars. We speak of the treatment under the following heads:

1st. Cleanliness. On this all are agreed. It is best accomplished by the use of a solution of boracic acid, gr. x ad ʒj, with which the discharge is to be washed from the eye as often as it accumulates, whether it be every ten minutes or every hour.

2nd. The use of heat or cold. Here there is some difference of opinion—some teaching to use whichever feels the most comfortable to the patient, while others advocate the use of cold or heat exclusively.

When we consider the cause of the disease, and remember that the cocci can be prevented from multiplying by a low temperature; when we know that we can produce this temperature in the conjunctival sac by actual observation; when we consider further the rapid changes, often destructive in character, produced by heat; and finally the fact, that as a rule, heat is not as well borne in these cases, we must conclude that cold applications are not only most rational, but that they are the best for the patient.

Cold is to be applied in the following manner: From twelve to fifteen pieces of white linen cloth, two inches square, are folded twice, slightly moistened, and placed on a cake of ice alongside of the bed. One of these is placed on the closed eyelids, and allowed to remain there until it begins to get warm, when it is changed for a cold piece, and this is kept up, so that we have a continuous application of cold, without any pressure as we would have from the use of an ice bag, however small. This plan necessitates the employment of at least two nurses, for the applications are to be kept up night and day. To prevent slight irritation of the skin which we sometimes have, we may rub a little vaseline on the outside of the lids and the surrounding skin. This employment of cold is not intended as an adjuvant to the other treatment, but is to be relied on as the principal part of the treatment.

The third item in the treatment refers to the use of nitrate of silver. In the use of this drug, oculists differ not only as to the stage of the disease when it is to be used, but also as to the strength of the solution. The practice at the New York Ophthalmic and Auric Institute is to use it in solution no stronger than 2 per cent. (gr. x ad ̄j.) Some use much stronger solutions. The objection to this practice is that where there is an ulcer of the cornea, in some cases, the silver has a bad effect. I remember, in one case, that

where the solution seemed to penetrate into the middle layers of the cornea, while the external layers seemed to be intact, it seemed to decompose this layer; at any rate that eye was lost.

Knapp employs the following method to protect the cornea: The upper and lower lids are everted at the same time, and the upper lid is allowed to descend until it covers the ball; we can then apply the solution, so that none of it comes in contact with the corneal tissue.

The solution is never used until the secretion is well-established—until the discharge becomes somewhat profuse. Many apply it in the early stage, and rely on it as the main line of treatment, while here it is regarded as an adjuvant.

The complications are the corneal troubles that too often accompany the disease. What we most dread is an ulceration of the cornea. The cornea may be involved in three ways: 1st, by continuity of inflammation; 2nd, by a choking of tissue at its margin, shutting off the nutrition; 3rd, by direct infection. This latter is probably the most frequent way in which the corneal complication takes place. The roughened lids brushing over the delicate epithelium produce abrasions through which the acrid secretions gain access to the proper substance of the cornea. The two causes combined tend to make the ulcers deeper, until the membrane of Descemet is reached, which is not liable to give way unless some violence is used. Should this membrane be broken, the cocci would gain access to the delicate structures within the ball, and set up an inflammation that could hardly fail to destroy the eye. Oftener, however, the eye is destroyed by the inflammation involving the whole of the cornea, which is then replaced with a cicatricial tissue. As this is not transparent, the eye is destroyed for all practical purposes. The anterior part of the ball may shrink (phthisis bulbi). The opacity may not be so extensive as described. It varies from a faint nebula that can hardly be diagnosed, but may interfere seriously with vision, to the total opacity

just described. Atropine—gr. iv. ad. ʒj.—is to be used for corneal inflammation or ulcer.

The treatment of these opacities does not always receive the attention that it should. Persistent treatment will clear up many of them in a wonderful degree. Where this cannot be done, the formation of an artificial pupil behind a clear part of the cornea is often indicated. Wherever there is any cornea, and the patient has perception of light, he should have the benefit of an examination by an expert, for some that are now blind may be made to see.

As to the other eye in these cases, it should be protected. This can only be done by seeing that it is kept clean, and that none of the dressings from the affected eye come in contact with it directly or indirectly.

We cannot seal up an eye to any advantage in an infant.

Those who are desirous of looking up this subject further are referred to an article by Weeks in the *N. Y. Med. Record* of July 24th, 1886.

ART. III.—Cerebro-Spinal Syphilis, with Report of a Case.

By E. L. TOMPKINS, M. D., of Washington, D. C.

FORMERLY ASSISTANT PHYSICIAN IN DR. HAMMOND'S SANITARIUM, ETC.

The case that I have to report this evening is one of cerebro-spinal syphilis, with gummatous infiltrations about the arm and leg centres, on the right side.

R. D. was brought to me by his friend on September 8th, 1891. He had the following history: White, æt., 32, single, has worked as blacksmith in the car stables in this city for seventeen years. Has always been healthy until four years ago. He contracted syphilis in the usual way; had the secondary symptoms, such as eruption over the entire body, sore throat, iritis, etc. He consulted Dr. Joyce, who told him he had syphilis. Under his treatment the symptoms disappeared.

* Read before the Clinico-Pathological Society of Washington, November, 1891.

About a year ago Dr. Joyce died. He then fell in the hands of some one else, but gradually became worse.

One year ago he had what was called a "stroke." That morning before going to work, he did not want to get up, and when finally made to do so, he dressed and undressed himself several times as if he did not know what he was doing. He finally went off to work, but his mind seemed to be affected, and he was very weak on the whole left side. He finally dropped, and was brought home in a helpless condition. He was not absolutely unconscious, but lay all day in one condition. His physician was sent for, and he improved so fast that he was able to go to work in a month.

On *September 3rd*, 1891, one year after first attack, he had another, somewhat similar to the first, but I imagine not so bad, as I saw him about a week after. One month before, his memory began to fail very rapidly.

On *September 8th*, he was brought to me. I found history of syphilis. He remembered having had a number of "boils" over his body, sore eyes, and sore throat. He knew his own name and age, but could not give the number of his house, and if he got out, he could not find his way back home or know the members of his family. He knew the name of the President of the United States, but not the names of the days of the week or month. He could not remember when he had eaten his breakfast, and would try to wash his face in a bowl without any water in it. His appetite was prodigious, and he would eat six or eight times a day if allowed. Frequently he was locked up in his room; and when he was at his worst, would have involuntary passages of feces and urine. He was subject to terrible headaches and pains in his joints and lower extremities. He realized that he was sick, but said that he could not remember anything.

His friends thought he was much weaker on the left side than on the right. In making him squeeze my hand, the difference was very marked—much weaker on left side.

The sensibility on the left side also seemed impaired. The prick of a pin was appreciated much more quickly on the right side than on the left, and he could not distinguish two pin pricks nearer than two inches apart. The patellar reflex was much exaggerated on both sides, and there was ankle clonus on both sides.

My diagnosis was cerebro-spinal syphilis with gummatous deposits on right side of brain over the arm and leg centres.

The treatment was increasing doses of the saturated solution of iodide of potassium, beginning with ten drops, and also a pill of bichloride of mercury, one-sixteenth grain each.

September 12th. Condition was about the same; he said he felt better, and I think he did answer questions more quickly, but not more correctly. I was hopeful of stopping the spinal symptoms with ergot; so concluded to give drachm doses of fluid extract of ergot three times a day, and the bichloride of mercury pill was stopped—the iodide of potassium continued.

September 16th. Doing only fairly well, but had hiccoughed so constantly and violently since taking the ergot, that he could not stand it. I gave him in addition the bromide of sodium and pepsine, with a view to stopping the hiccough.

September 20th. Still hiccoughing, but probably not so much. However, it was still so bad that I stopped both ergot and bromide, but kept up the iodide of potassium.

September 24th. No hiccough and doing well; says he feels very well. He had now gotten up to forty-two drops of the iodide potassium three times a day. Answers questions quickly and much more correctly. I resolved to give him hypodermic injections of sulphate strychnia, in increasing doses, in order to stimulate his brain still more. I started with one-fiftieth grain.

September 26. Shows marked improvement, but probably not from one injection of the strychnine; knows the members of his family and relates incidents. His friends even admit that he is improved. Friends, as a rule, are the last persons who admit any change for the better. I had already told them that I did not expect any marked change until he had gotten up to 75 drops or perhaps 100 drops three times a day.

September 27th. Friend says he has been obstinate and refused to go home unless he had two glasses of soda water. His memory does not seem so good to-day; says he feels badly. Appetite is still large, but does not seem to care what he eats. Sleeps well. Bowels regular, and he now goes to the closet himself—three weeks ago he would soil his clothes. Iodide of potassium still kept up in increasing doses, as also the hypodermic injections of strychnine.

September 28th. Was worse yesterday after getting home, wanted to go into the street all the time, but to-day is much better; sleeps and eats well. Came to the office without any

assistance, and he also took his medicine without trouble. Patellar reflex still exaggerated, and also some ankle clonus; wrist reflex not well marked. Sensory impairment about same.

September 29th. His friend says he is better this morning, but rather troublesome last night. His face is much brighter, but he talks much that is not right. Not so despondent and quiet as formerly. Answers questions quickly, but often wrong. Holds paper in his hand a great deal of the time, but it is doubtful if he actually reads it. However, he does not eat so ravenously, and is much more fastidious about his food. He takes much more notice about things and persons, and remembers his friends. His friend says that he always got better when Dr. Joyce treated him, and got worse when treatment was stopped.

September 30th. Friend thinks he is much better, especially in the mornings; no longer has the pains in his legs and knees; talks perfectly rationally. Of the iodide of potassium solution, he has now reached sixty-eight drops three times a day. Still has exaggerated knee-jerk and ankle clonus, but no appreciable defect in his gait. Patient thinks he is much stronger on the left side than formerly. He now reads the papers and narrates what he has read.

October 1st. Says he feels better than for a long time; would like to go back to work. Iodide potassium has reached seventy drops, and strychnine one-fortieth grain. He notices everything; picks up the newspapers and reads them, knows his friends and speaks to them on the street; knee-jerk not so marked, and not so much ankle clonus. Feels the prick of the pin almost instantly on the left side; before it was very sluggish, and quite an appreciable time elapsed before he felt it. He now dresses himself properly; heretofore he had to be dressed.

October 2nd. Friend says he was perfectly rational ever since yesterday morning—as well as could be wished. Iodide potassium seventy-two drops; one-fortieth grain of strychnine. He went out to visit his friends in the evening and returned by himself. The fact of this man always getting well when under syphilitic treatment, and getting worse when he had no treatment, proves clearly that the case was one of specific origin.

October 3rd. Friend says he is doing splendidly; seventy-six drops, and one-thirty-fifth grain of strychnine.

From now on there is steady improvement. The iodide was steadily increased one-thirtieth grain. He got to chew-

ing tobacco incessantly, which seemed to do him harm. He also went out every night, and would feel badly next day. He got in the habit of going every evening to see a woman in Georgetown, who exerted a very bad influence over him. She tried to persuade him to leave his home and live in Georgetown. In this way he frequently missed taking his medicine, and would be worse the next day. The pills of bichloride of mercury, one-thirtieth grain, were now renewed; iodide and strychnine continued.

October 15th. Friend says he is much better; great change from the sluggish condition of his mind of a month ago; he has now reached 104 drops of the iodide. Mercuric pills continued, as also the hypodermics of strychnine. Knee-jerk about normal; very slight tendency to ankle clonus. Sensory impairment very much less, can distinguish two points one-fourth inch apart. Never has hiccough now nor headache; bowels regular and urine normal. He was never examined opthalmoscopically, but complained of no eye symptoms.

October 17th. Doing well, but urine contains large quantity of phosphates; his mind was apparently normal.

October 19th. Allowed to go to work to-day, but keeps up his medicine; says he feels better from working. The foreman, however, said he asked too many questions, and told him not to come to work the next day. This mortified him greatly.

October 22nd. He was summoned as a witness to the police court; got much excited over this; was very nervous and could not sleep. He was put on bromide of sodium and pepsine again. This had the effect of making him stay at home at night.

October 31st. Bromide was stopped now, as he was considerably under its influence. He had now reached 125 drops of the iodide of potassium. His mind was in good condition. Knee-jerk was about normal, and he had gotten his natural walk. He was told to go back to 100 drops of the iodide and report in a week. The following was also given him:

R_y.—Strychnia sulphate.....gr ss
 Acid phos. dil.....ʒij
 Water.....ʒii—Mix.

S: Teaspoonful three times daily.

[N. B.—It is proper to state that I saw this man again in about ten days after the above was written. He then was

well physically, and talked very sensibly on every subject except matrimony. He had an inordinate desire to get married, but in other respects was very rational.]

Only a few hours after this man had left my office, I received the *New York Medical Journal*, in which was an excellent article by Dr. Sachs, called "Multiple Cerebro-Spinal Syphilis." All of you have very likely read the article yourselves, but some of the symptoms of his cases resemble so much those of mine, that I would like to compare them.

In Case I, Dr. Sachs says, besides other things, that "During the summer of 1889, she suffered from headaches and vertigo; fell frequently on the street, but claims never to have lost consciousness. Her mental condition was normal, but she was much disturbed by pains and increasing weakness in her legs." He goes on to say that she finally became bed-ridden, and was sent to the Mt. Sinai Hospital, and was subjected to anti-syphilitic treatment. Her symptoms at that time consisted of headache, vertigo, absolute paraplegia of lower extremities, marked hiccough, obstinate constipation, and retention of urine.

Later on she developed paralysis of left arm and hand, and after a few days, paralysis of both lower extremities; became confused in mind, and almost demented; mental condition was characterized also by severe depression; developed incontinence of urine and fæces. She finally died, and the autopsy verified the diagnosis.

As Dr. Sachs says: The special features of this history are: 1. A spastic paralysis of the cerebro-spinal type. 2. Recovery from this attack. A second attack of spastic paralysis of upper and lower extremities with cranial nerve involvement.

Dr. Sachs' second case resembled mine principally in paralysis of left arm and leg, the exaggeration of the knee-joint and double ankle clonus. No sensory impairment in his case, but marked in that of mine.

As far as I have been able to judge, in spinal syphilis, the lateral columns have been more frequently attacked, Dr. Sachs bears me out in it. He says: "The posterior col-

umns of the cord do not appear to be as frequently involved as the lateral columns."

It is not infrequent that cases of cerebral syphilis are seen, but those cases embracing both, are not seen so often, although I can recall several that came under my observation at Dr. Hammond's Sanitarium.

One was that of Mr. X. Y., of Texas. His history is as follows. Married twice; had eight children by first wife; caught syphilis before he married the second time I suppose, because he had only one child by his second wife, and that one had congenital syphilis. When he came to the Sanitarium he was in a most deplorable condition, entirely out of his mind, didn't know anything or any body, muscles of tongue considerably paralyzed, also those of the throat; could not articulate well, and it was almost impossible to understand a single word he said; paralyzed on left side, would fall out of bed and not be able to get back. Knee-jerk greatly exaggerated, and well-marked ankle clonus. No sensory impairment. He was put on pills of bichloride of mercury, and increasing doses of saturated solution of iodide of potassium, and foradic electricity applied to tongue and throat, with marked benefit. His improvement was slow at first; but by the time the iodide reached 100 drops, he improved rapidly. We finally got him up to over 700 drops a day. By this time he could walk about four miles, and did do it every day. His speech was almost as good as ever, and his mind about normal. He went home apparently well, but I believe he stopped taking medicine and had a remission, and was brought again to the Sanitarium in as bad a condition as before. Under the iodide treatment he again got along well, and went back to Texas. I am told that he has had another remission, but was then taken to the Hot Springs, Arkansas, where he now is.

Another interesting case is that also of a man who was a patient at the Sanitarium.

January 7, 1889.—Mr. A. B., of Omaha, æt. 47; married, but no children; has had bronchial trouble and no health generally for years; has had syphilis, but never any eruption over the body. Last April, his present troubles began. While walking on the street, he suddenly began to froth at the mouth, and his head turned to one side involuntarily; he could not get it straight without difficulty for some time. He realized something was wrong, and started for home. At

the same time, he lost his voice; tried to speak to a policeman, but could not. He recovered his voice in about half an hour, became very drowsy, and went to sleep in the car. After getting home, he took a nap, and felt better, but had another slight attack in three hours. He never lost consciousness; bowels very free. In two days, he had two slight attacks, but not so severe. On fourth day, another attack; no froth at the mouth, but thickness of speech. It took him a week to recover from this attack. In the middle of May, he had another attack, in which he lost consciousness. This attack came on gradually; he became very stupid, and knew little that was going on about him. Partial loss of power in right arm and leg, and had great pain in right side of head. Slowly recovered in a month. In August the left hand became weak, and finally left leg began to drag. He became very low spirited, and cried a great part of the time. In September, he suffered from double vision, and also incontinence of urine.

In October, he went to Dr. Hammond, who was then living in New York. Suffered much from obstinate constipation; sometimes he would not have a passage for a week. He improved while in New York, but as soon as he returned home, the pain in his head returned, which was in the forehead and back of the head. No dizziness.

In December, he came to the Sanitarium. He was then having pain in head and blind spells. Very low spirited. He was put on increasing doses of sat. sol. iodide potash—the statical electricity applied to his spine, and hot douches against his back. He was feeling well when he left, and I have not heard from him since, except that he bought a bicycle and was practising on that.

Both testicles had been removed at different times on account of pain and enlargement.

The question would naturally be asked, what these testicles were removed for. The patient said it was for pain and the enlargement. But Von Zeissl says that "A commencing syphilitic disease of the testicle generally runs a totally painless course, and for that reason hardly ever attracts the attention of the patient. In exceptional cases, it manifests itself by slight pains, which run along the spermatic cord, radiating toward the corresponding inguinal region." This must have been, then, one of the exceptions, and was probably an orchitis or a gumma. It is more than probable

that, whatever the disease was, it was of a syphilitic nature, because the testicles had been removed only recently, and at different times; and although he had been married a long time, and had a fine-looking, healthy wife, he had never had any children.

Ricord states that the semen secreted by these diseased (syphilitic) testicles is diminished in quantity and changed in quality; that it contains no spermatozoa, and is simply a thin transparent fluid.

Von Zeissl goes on to say that "In the testicles of robust persons, who bore indications of having had syphilis, which, however, had been completely cured, Levin found the spermatozoa were often absent (in 50 per cent.). These statements agree entirely with those of H. Zeissl. He knew many men who had suffered with syphilis, and notwithstanding that, they possessed strong constitutions, begat no children, though their wives were perfectly healthy."

According to Dowse, of London, syphilis was not recognized as a special and characteristic disease until the end of the fifteenth century, although it existed at a much earlier period. He says, "that the first treatise written in the English language upon *"Lues Venera"* was by William Clower, one of Her Majesty's chirurgiens (1596), who mentions that he had known "divers persons infected, who were free from any disease of the organs of generation." But he gives Dr. Reid, of Bedford, the credit of being the first Englishman to draw attention to syphilitic disease of the nervous system.

He was followed soon after by Broadbent, Hughlings Jackson, Buzzard, and others.

Dowse continues by saying that "Histology shows us that there is no essential difference in structure between an indurated chancre, a secondary tubercle, and a tertiary gumma; and it is well to note here that, in the low forms of inflammation engendered by this virus, they are all more or less distinguishable as fibro-plastic, consisting of small nuclei, fatty granules, and amorphous material. Yet it cannot

be affirmed that all gummata are of precisely the same nature, any more than it can be stated that the products of the more common inflammations are essentially of the same kind."

Sir James Paget says: "I think that one of the things which we have most to study, both in the pathology and treatment of syphilis, is the modifications which it undergoes in persons of different constitutions, in whom it may be inserted."

Dowse says again: "There are two prime factors which tend to induce syphilis to expend itself upon the brain and nervous system. The first of these, and perhaps the most important, is an unstable condition of these parts from hereditary disposition. The second is due to an instability, which is the result of previous inflammatory change (either idiopathic or traumatic in its origin), or from molecular derangement, followed by due selective nutritive capacity in the nerve or connective tissue cells, by which their tonic capacity is impaired."

As examples of this, he reports two cases of an endosteal gumma producing pressure on the brain and cord.

The first is that of an officer, who, when young, fell heavily whilst riding in India, and besides fracturing the right collar-bone, he struck the right side of the head. For awhile he was unconscious, but eventually recovered, and enjoyed excellent health. Some years after, he contracted syphilis in a very severe form, which so depressed his spirits and unfitted him for his duties, that he was compelled to resign his commission. He improved after awhile, and was very well for several years. At the age of 59, in the middle of a hot summer's day, he became faint and partially unconscious. From this time he complained of great pain in his head, coming at a certain time at night and continuing until morning. Pain was circumscribed and confined to the parietal eminence, which was a focus of intensity. It would continue for weeks, then leave him, and return with increased severity. The appetite was bad and digestion faulty. Ophthalmoscope showed no retinal change. During the paroxysms of pain, the intellect was obscure, memory weak, and frame of mind variable. There was a pseudo-paresis of left side of face, arm, and leg. His attention was first

drawn to the failure of power in the arm when he was in the act of raising a fork to his mouth—the grasp became relaxed, and the fork fell. Sensation was less affected than motion; there were no formications, and only slight subjective sense of heaviness. The paralysis was evanescent, and at times the leg would feel weaker than the arm; at other times, the arm would feel weaker than the leg. Upon examining the head, he found a semi-elastic, circumscribed swelling over the parietal eminence, and he concluded that, in addition, there was caries of the skull and an endostial swelling similar to that visible in the outer surface; but from the manner in which the patient improved under anti-syphilitic treatment and good diet, he was led to the belief that an internal, as well as an external gumma existed, and that there was merely an inflammatory hyperplasia of bone structure.

His second case I will not quote at length, as it does not include the brain, but produced an intermittent paralysis of the lower limbs, of motion only, presumably from a growth of gummatous nature, proceeding from the eleventh and twelfth dorsal vertebra, and involving the anterior columns of the spinal cord—the membranes and nerves, producing severe, reflex, and automatic movements (spinal epilepsy).

But I wish to quote him verbatim in regard to the essential gross pathological features of syphilitic lesions of the nervous system.

(a) The inflammatory thickening membranes of the brain, spinal cord and nerves “may originate in the lining membranes of the osseous system with which these structures come into contact. (b) The invasions of the neuroglia or connective tissue, by a diffuse form of gummatous infiltrations which might be the result, primarily, of disease of the circulatory system, or alterations of the fluids circulating within the vascular channels of the nervous tissue. The latter condition gives rise to albumino-fibroid changes—more especially in the white nerve substance—and is often associated with a low form of inflammation of the membranes. (c) The appearance of syphilomatous masses, which often occur singly, but may be numerous. Their seat may be over the surface of the hemispheres, but I have usually found them in the upper convolutions of the anterior lobes, or they may occur at the base. At any rate, they are to be seen invariably at the cortex, and closely united with the membranes. They extend into the surrounding tissue, which is generally found to be softened, hypervascular, and of a faint, yellow

color. When examined, they present the appearance which has previously been noted—the nerve-cells and vessels giving evidence, under the microscope, of the usual degenerations consequent upon vascular occlusion.”

I wish to say only a word or two in regard to the *treatment*. The two medicines that seem to be specially adapted to syphilis in any form are, as you all know, mercury and iodide of potassium. I was taught to give mercury in the early stage, and iodide of potassium in the latter stages. I am inclined now to think that both are indicated throughout the course of the disease. At any rate, it seemed to me that patients at the dispensaries in the eruptive stage would improve faster on the mixed treatment than on the mercury alone. I am aware, however, that there is great difference of opinion about that. But what I wish to say is, that both ought to be given in syphilis of the nervous system. Some writers advise giving mercury for awhile, then iodide of potassium, then return to the mercury again.

Althaus, however, claims that mercury should be given continuously, and I agree with him, but believe that the iodide of potassium should be given too.

In my opinion, the best way to give the iodide is in increasing doses of the saturated solution, beginning with ten drops three times a day, and increase two drops each day. In this way you rarely get the disagreeable effects of the iodide which simulate influenza. It should be gradually increased, as Dr. Hammond says, until the effect is manifested. He claims that there should be no fixed limit to any medicine, but given until the physiological effect is produced, and I have known him to give as many as 800 drops of the saturated solution per day.

Mercury has been given successfully in the form of bichloride, biniodide, protoiodide, inunctions, etc.; also hypodermics of the bichloride have been tried. Althaus believes in giving the metallic mercury hypodermically and after the following formula:

Metallic mercury.....	1 part.
Purest lanoline.....	4 parts.
Carbolic oil (2 per cent.).....	5 parts.

Of this he gives five minims. He praises this manner very highly, and says it rarely produces pain or abscesses, and that it is due to the carbolic oil that prevents the inflammatory process.

My experience, in giving the pure mercury in this way, has not been large, but I made so many abscesses I had to stop. The preparation that I used was made according to the above formula, very carefully, by W. S. Thompson, the druggist, but the abscesses were so large as to produce considerable constitutional disturbance, and had to be lanced several times. I do not think I shall try it again.

1129 *Fourteenth Street N. W.*

ART. IV.—Glaucoma—A Clinical Lecture Delivered at the New York Polyclinic.

By J. H. CLAIBORNE, Jr., M. D., of New York, N. Y.

Gentlemen,—This old man has been here before; we have been treating him for glaucoma, and his eye is getting better. The affected eye is much harder than the other, for the tension is considerable, probably as much as +1, for T+3 is said to be the hardness of stone. We will say that this is T+1. Tension is caused by infusion into the eye itself. The iritic angle is lost. The iritic angle, you know, is that formed by the iris and cornea.

It is important to know how the aqueous humor of the eye is secreted. Some say that it is secreted by vessels near the ciliary body; others that the whole uveal membrane itself secretes. The latter is more probably correct.

There are a number of spaces back of the intersection of the iris and cornea, and directly back of the pectiniform ligament; these spaces are known as the spaces of Fontana. Through these spaces, in part at least, the water of the anterior chamber is carried off.

The fluids of the eye are constantly forming and constantly being removed; but if too much aqueous humor be

formed to correspond exactly to the amount carried off, or if the carrying-off vessels are not able to carry off as much as is secreted, there will be too much fluid in the eye; this condition is *glaucoma*. We can prove that it is the presence of too much fluid that causes the hardness of the eye-ball. By injecting a few drops of water into a pig's eye with a hypodermic syringe, the ball will become as hard as a rock.

The name given to hardness of the eye-ball—*glaucoma*—is a Greek word, meaning green surface, for the pupil, under the circumstances referred to, assumes a grayish-green tint—that is, in severe cases. We have been able to definitely diagnose the condition of the optic nerve in *glaucoma*, but the knowledge we had of the disease antecedent to the discovery of the ophthalmoscope was that the eye-ball became hard, the anterior chamber shallow, and that there was a grayish-green tint to the pupil, and that blindness resulted.

The hardness of the eye ball was naturally attributed to an increase of its contents, and it remained for von Graefe to definitely prove, by his experimental iridectomies, that this was so. His idea consisted in taking a piece out of the iris, the wound remaining open for a long while, that there might be a constant flow of fluid, thus relieving tension.

Since the days of von Graefe, men have offered solution upon solution of this difficulty, but none have been satisfactory to intelligence or experience. Most of the theories advanced hung upon either of the conditions referred to, or upon both of them—that *glaucoma* was caused by an increase of fluid, or by an obstruction to the outlet. That both of these theories are, in a measure, correct, there is but very little doubt. If you regard the state of affairs for a few seconds, you will see that one of these conditions necessarily depends upon the other. I do not think that there can be a more reasonable theory than that, the eye-ball containing too much fluid, pressure takes place from behind, and the iris is pushed forward on the posterior sur-

face of the cornea, so that no fluid can pass it; a little does pass it, but it is not enough to maintain a normal state of affairs.

I am as hopelessly ignorant as everybody else why glaucoma should occur. Does it take place in full-blooded persons, or in persons whose circulation is not good? The main point we can draw is that this disease is restricted to certain ages and to certain races. Glaucoma is practically unknown in children; I never knew of a case occurring in a child, and never read of one; but it is a well-known fact that the Jewish race is peculiarly liable to it, a fact which is abundantly proved by observation. From these two facts we can draw conclusions.

In the matter of age, it is easy to understand why it should attack those of a mature age, because we know that at that time certain conditions of the eye-ball exist which are not found in childhood. In childhood, nearly all eyes are short, hyperopic, and nearly all the tissues are full of animal matter, and particularly of water, making them elastic. If there is pressure in the eye of a child, the eye-ball will spread; the spaces of Fontana are widely open; osmosis takes place with such ease that it is practically impossible for such an eye to be distended by increase of fluid. Indeed, the physiological changes take place with such accuracy and rapidity that glaucoma seldom occurs in childhood. In old age it is different; the eye-ball loses a great part of its water, and becomes resistant, so that if there is pressure from behind, the iris is thrown forward, the iritic angle is diminished; and the moment the angle is diminished less fluid is thrown off, exudation constantly occurs, the pressure increases, the eye-ball becomes hard, sight is lost, and there arises the condition known as glaucoma absolutum.

It is unnecessary for you to make use of the ophthalmoscope to diagnose this. When there is hardness of the eye-ball, associated with great pain and certain visual disturbances, such as seeing flashes of light and a peculiar halo around the flame of a candle, there is sufficient evidence on

which to make the diagnosis. It is easy in these cases, because the means of observation are limited; for it is true that the greater the means of observation, the greater are the chances of overlooking something.

There are changes in the eye, in glaucoma, which are worth knowing and remembering. When a patient comes with history of pain around the eye and down the nose, of loss of sight, of seeing flashes and a halo around the candle, with hardness of the ball, you need not make use of the ophthalmoscope to find out what the trouble is. Sometimes the eye is suffused, the eye-ball red, brick-dust blood-vessels cover the sclera; but there is nothing that is more perfectly characteristic than the fishy appearance of the eye. It has lost its lustre, its clear, healthy appearance, and is more like the eye of a fish that has been dead some time than anything else. Sometimes the cornea looks as if it had been steamed; and if you examine carefully, you will be able to see that the anterior chamber is shallow. Nearly always the pupil is more or less dilated, but that varies in different people, and it is not responsive to light. If you put your hand over the affected eye, and remove it suddenly, there will be, practically, no change in the size of the pupil. If you examine the eye with the ophthalmoscope, you may detect the fact that the aqueous humor and the vitreous humor are, perhaps, a little cloudy; this, however, need not be the case. If you look still further at the optic nerve, you will see the one characteristic thing by which glaucoma is diagnosed with the ophthalmoscope—the excessive cupping of the optic nerve. It looks like the bung of a barrel half pushed in. If you watch the blood-vessels as they pass into the disc, you will notice that when they come to the edge of this cupping, they look like snakes crawling into a hole. By using a proper glass, you may be able to study the convolution of the vessels at the bottom of the cupping. Do not attempt to always diagnose with the ophthalmoscope, though the latter has almost reduced the examination of the eye to a mechanical affair; but take my advice, and get

the history of the patient before you make your examination, or you will become, through habit, careless in the matter of histories.

There are several forms of glaucoma, and your first case may not be like this before us. The anterior chamber may be filled with blood, the eye-ball as hard as a rock; and you may be surprised when you throw light into the fundus, for you will be unable to see the back of the eye. Under these circumstances you will probably have to deal with a case of *glaucoma hæmorrhagicum*, and they rarely get well. Most cases of glaucoma will be of a flitting form that does not go on to complete destruction of the eye; this form is called *glaucoma simplex*. Then there is another form which is excessively rare. You might be called to see a patient in the middle of the night, and find him with agonizing pain in the eyes and unable to see at all, the pupils dilated, and the ball hard as a rock. Such would be a case of *glaucoma fulminans*, and would be hopeless.

It is necessary to do something for glaucoma, and the *treatment* can be summed up in a few words. If we had any sure medicinal means of relieving the intra-ocular tension, we might hope to cure glaucoma; but we are restricted to one or two remedies which we know will merely decrease the high pressure, namely, pilocarpine and eserine. Many cases of simple glaucoma can be relieved by means of eserine, which is more commonly used than pilocarpine. Outside of these two drugs, I am not aware that there is anything else. No form of local treatment is of any use, unless it is hot water. Though I order hot water, I have but little faith in it.

Von Graefe struck the keynote when he proposed to open the cornea and leave a wound that would drain the anterior chamber. His operations were purely experimental, but it was found that they restored the sight in many cases, and did good in all, except where the glaucoma was absolute. The operation is this: Make a slight opening into the anterior chamber, take hold of the iris, cut off a portion of it,

make the wound antiseptic, and tie up the eye; the eye will heal when it is ready; the chances are that they will not heal until the pressure is relieved. You will find cases of iridectomy for glaucoma, in which the wound will not heal for a couple of weeks; in other words, the pressure behind keeps the wound open to drain the eye.

A very simple means of relieving pressure instantly in a bad case, is to make use of a cataract knife. Steady the head as I have shown when making use of the actual cautery, pass the knife into the anterior chamber, let out the aqueous humor, and withdraw the knife quickly. I have known immediate relief to follow this.

In glaucoma, the cornea is apt to be anæsthetic; but whether iridectomy can be done without cocaine, remains to be seen.

Then, again, there is another little operation known as *sclerotomy*, which is difficult for me to describe, and also difficult to perform. It consists in passing the knife through the scleral margin into the chamber, and causing it to appear on the other side through the sclera; as the knife is shoved through, the entire sclera is cut, but not the conjunctiva, so that when the cut is finished, the conjunctiva lies uncut over the incision. Drainage takes place in that way, and an artificial pupil is not necessary. The operation of stretching the external nasal nerve is hardly worth passing notice. It has been cut down upon and stretched for glaucoma, but, for my part, I doubt the value of the operation. These three operations, and the simple therapeutic measures I have mentioned, are the only forms of treatment for glaucoma.

Peacock's Bromides.—Dr. R. Robbins, of Hartford, Kan., writes that "this is a most excellent preparation; has used it with success in spasms, nervousness, etc.; that it is an excellent remedy for headaches; and adds that he cannot get along without it."

ART. V.—Hints on Treatment of Gonorrhœa.

By C. G. CANNADAY, M. D., of Roanoke, Va

Any one who will take the trouble to examine most of the short articles contributed to medical journals, and note the *so-called* cures and specifics for the many ills spoken of, will be convinced that very many doctors are "in a rut," and do not sufficiently consider the special conditions of the disease demanding special lines of treatment. For example, Dr. A. writes that salicylate of soda and Dover's powder are *the* remedies for rheumatism. Dr. B., that acetate of zinc, gr. xx, fluid extr. pinus canadensis, ℥vj, distilled water, q. s. ℥vj. M. Sig.—Inject three drachms three times daily, will cure a gonorrhœa. Dr. C., that "antikamnia" will *invariably* cure neuralgia, etc. Thus, we have dogmatic assertions of cures, without reference to cause or stage of disease. It is plainly as unreasonable to expect any one medicine to cure all stages of the same disease as it is to regard all diseases due to the same cause. This is undoubtedly true of gonorrhœa.

Many physicians confound simple urethritis with specific urethritis. In the former the symptoms are not severe, of short duration, non-contagious, and respond to such treatment as is usually adapted to the cure of inflamed mucous surfaces. But specific urethritis (or gonorrhœa) is contagious, of more or less prolonged duration, and rebellious to treatment. Every function of the parts involved is painfully performed. The severity of the case stands boldly prominent, and the old maxim in surgery is to be observed—rest and position.

In the acute stage of gonorrhœa, the best plan of treatment consists in the use of anodyne applications, hot fomentations, and a saline aperient (such as citrate of potash ℥j to ℥ss three times daily) with the objects of subduing inflammatory action and of neutralizing the irritant quality of the urine. An occasional suppository of opium and belladonna is sometimes demanded. In every case, the diet

and beverages should be light and non-stimulating, and physical exercise should be avoided. As to injections in this stage, the invariable rule should be "hands off." I assert this with the conviction of experience as my authority—that more harm is done by injections *during the acute stage* of gonorrhœa than would occur if the disease were let alone. An inflamed mucous membrane, so turgid, congested, sensitive, and œdematous as to permit the passage of urine over it only with difficulty and severe pain, does not suggest nor allow the use of irritant or astringent injections. Injections should never be used until all acute symptoms have passed away, which rarely occur under two or three weeks. It should not be forgotten that specific urethritis is a self-limiting disease.

When injections are begun, they should be very weak. For instance, two drachms of a solution of half grain sulpho-carbolate of zinc in an ounce of distilled water is sufficient. This should be used as warm as can be borne, and retained not exceeding a minute; and the greatest care should be taken to avoid injuring the mucous membrane by rough handling or forcible injections, etc.

As for the selection of syringes, only those having smooth, blunt, conical points should be allowed. The solution to be injected should always be warm. Just before urinating, a very small quantity should be injected and retained only a few seconds; then immediately let the patient pass urine. This injection should be repeated for several days, and then not until about twenty-four hours after last injection. After this, however, the injections should be larger and more frequent, and allowed to remain a little longer each time. Finally, when no pain is induced, inject before and after urinating. Attention to these details is essential to the satisfactory treatment of gonorrhœa.

Protracted cases should be carefully examined per rectum with the finger, etc., for prostatitis, stricture, deep seated complications, etc.

It is important to retain professional care of gonorrhœal

patients until they are cured. They are generally a migratory class of people; and hence demand payment in advance. Then they are more apt to come back.

ART. VI.—Some Favorite Prescriptions.

By EUGENE L. CRUTCHFIELD, M. D., F. S. Sc. (London), of
Baltimore, Md.

MEMBER OF THE CLINICAL SOCIETY OF MARYLAND.

Notwithstanding the constant hue and cry against routine practice, it is safe to say that nearly every physician has certain formulæ (either original or borrowed) which have been of such service, that he has learned to rely upon them to meet special indications. By this, it is not meant that he uses these combinations on any and every occasion—that he employs a certain prescription to treat “a name instead of a condition;” but an intelligent practitioner will always be guided by the requirements of the case, and know when to write a prescription in its usual form, and when to alter it somewhat as the symptoms may indicate. It is to a few of these formulæ, that have been of material aid to me, that I now wish to call attention.

For *infantile colic*, the following I have found most serviceable. It contains no opium or other deleterious ingredient. It may, therefore, be administered almost *ad libitum*. Its action, however, is so prompt and satisfactory as generally to render more than two, or at the most, three doses unnecessary:

Ry.—Sodii bicarb..... gr. viij
Olei anisi.....m. viij
Mucil. acaciæ3ss
Aq. menth. pip. q. s. u. f.....3ij
M. Sig.—3j every half hour.

For the relief of pain the following prescription is invaluable. It was originally intended for the *spasmodic colic of adults*, but I have known it to be of benefit in so many other affections (*angina pectoris, asthmatic paroxysms, etc.,*)

that under no circumstances would I like to be deprived of the formula. Of course, it is most useful in troubles into which a convulsive element enters :

R_y.—Spts. chloroformi..... $\bar{3}$ ij
 Tr. opii camph..... $\bar{3}$ vj
 Tr. cardamomi comp. q. s. u. f..... $\bar{3}$ ij

M. Sig.— $\bar{3}$ ss *pro re nata*.

As a *carminative*, the following mixture is excellent :

R_y.—Tr. calumbæ..... $\bar{3}$ ij
 Spts. ammon. aromat..... $\bar{3}$ iss
 Tr. cardamomi comp. q. s. u. f..... $\bar{3}$ ij

M. Sig.— $\bar{3}$ ss *pro re nata*.

In cases of *malarial cachexia*, after the periodicity has been broken up by the large doses of quinine, the following combination fully meets the indications of the case, viz., to tone up the system and prevent a return of the chills :

R_y.—Liq. sodii arseniatis..... $\bar{3}$ j
 Ext. eucalypti fl..... $\bar{3}$ ij
 Tr. cinchonæ comp..... $\bar{3}$ iss
 Aquæ cinnamoni, q. s. u. f..... $\bar{3}$ ij

M. Sig.— $\bar{3}$ j *ter in die*, in water, after meals.

In *atonic dyspepsia*, I have known the following to act like a charm. The pepsin and the lactic acid supply the deficient secretion of the stomach, while the nux vomica acts as a tonic to the nervous system, and stimulates the gastric mucous membrane to a proper performance of its functions :

R_y.—Liq. pepsinæ..... $\bar{3}$ ij
 Acidi lactici..... $\bar{3}$ vj
 Tr. nucis vomicæ..... $\bar{3}$ iss
 Aq. menth. pip., q. s. u. f..... $\bar{3}$ iv

M. Sig.— $\bar{3}$ j *ter in die*, after meals.

For a long time I searched for a prescription that would cure *sick headache*. Various combinations were tried, but nothing satisfied me until I came across the following in an English work on "Headaches; their Nature, Causes, and Treatment," by Wm. Henry Day, M. D., M. R. C. P., Lond. To this I have added one ingredient, the bromide of ammonium. Some may object to the formula on the ground of

polypharmacy, but where every drug is given for a definite purpose it is allowable to combine many ingredients into one prescription, especially when the resulting compound is as efficacious as the following:

R_x.—Sodii bicarb.....
 Bismuthi subcarb.....
 Pulv. acaciæ.....āā ʒj
 Spts. ammon. aromat.....ʒij
 Ammonii bromidi.....ʒiss
 Syr. zingib.....ʒiij
 Aquæ dest., q. s. u. f.....ʒviij

M. Sig.—ʒj as required. Repeat if necessary.

In the *first stage of pneumonitis*, and in other diseases in which a febrifuge is called for, the following has proved of great service to me:

R_x.—Tr. veratri viridis.....m xl
 Tr. cinchonæ comp.....ʒj
 Potass. acetatis.....ʒss
 Morphini acetatis.....gr j
 Aquæ dest., q. s. u. f.....ʒij

M. Sig.—ʒj every two hours.

In *neuralgic cephalalgia*, and in the *early stage of la grippe*, when the patient complains of pains and aches from head to foot, the following has answered admirably. It also causes a reduction of temperature in *la grippe*:

R_x.—Quininæ sulph.....gr. ix
 Antipyrine.....gr. xviiij
 Ext. hyoscyami.....gr. iij
 M. Ft. capsul. No. vj.

Sig.—One capsule every two or three hours.

The last prescription to which I desire to call attention, is one recommended by Prof. W. A. Hardaway, of St. Louis, and used in his clinic. I found it in the *St. Louis Courier of Medicine*, for December, 1890. It is of service in the *eczema of children*. Having tried it, I can testify to its value.

R_x.—Ung. picis liquidæ.....ʒss
 Ung. aquæ rosæ.....ʒiss
 Zinci oxidi.....ʒj

M. Sig.—Spread on lint and apply.

These formulæ are here given because, having been of

service to me, I am anxious that others may also have the benefit of them. The majority of them are original. They are all, in my humble opinion, efficacious.

1601 *Eutaw Place*.

ART. VII.—Should Not the Oculist be More Careful in Prescribing Colored Glasses?*

By W. L. BULLARD, M. D., of Columbus, Ga.

Doubtless all of you are cognizant of the fact that our text-books—the most of them at least—fail to give any advice as to the wearing of colored glasses save as a protection to bright and reflected lights.

Soelberg Wells says (*Dis. of Eye*): “Eye-protectors are found of much service to guard the eye from very bright light, dust, or cold winds. The best are the medium blue, curved. Moreover, the blue color, on account of its more eccentric position in the solar spectrum, makes less impression upon the retina. Smoked glasses are not so good, and they more or less subdue and diminish the whole volume of light and color, and thus render the image somewhat indistinct.”

Mittendorf says (*Dis. Eye and Ear*): “The use of colored glasses are indicated in all affections of the eye in which the irritating effect of bright light is to be avoided. Corneal, iritic, retinal, and some forms of conjunctival diseases call for their use, and in these cases blue glasses are especially useful. Such glasses ought to have the shape of a shell, and are called coquilles.”

Noyes says (*Dis. of Eye*): “We first speak of protection of the eye from hurtful influences—viz: from dust, smoke, glaring light, and extreme heat, by colored or translucent glasses. Protective glasses are known usually as coquilles, and shaped like a watch-glass, and tinted London smoke or blue. The neutral tint is generally better than the blue.”

* Read at the Third Annual Meeting of the Tri-State Medical Association, at Chattanooga, October 27, 1891.

Hartridge tells us (*Refrac. of Eye*) that "Tinted glasses are sometimes required for diminishing too much light, in cases of irritation or inflammation of the retina, or of photophobia from various causes, as myopia, etc. In these cases, light blue, which cut off the orange rays, are the best, but smoked colored are preferred by some surgeons."

Meyer (*Dis. of Eye*), Lawson (*Dis. and Inj. of Eye*), Carter and Frost (*Ophth. Surg.*), Macnamara (*Dis. of Eye*), Landolt (*Exam. of Eye*), Julier (*Ophth. Science and Prac.*), and numbers of others, altogether ignore, in their respective works on diseases of the eye, the wearing of colored glasses.

It is not any particular color, however, to which I call your attention; yet I am fully convinced that London smoked glasses, as a rule, are more comfortable to a diseased eye than blue, and oftentimes have I tested patients, and invariably the smoked glasses would be the more preferable.

Now, as to the shape, I beg to say that, beyond all question, the glasses should be perfectly plain—that is, flat—so the rays of light are not changed; and it is this error in refraction that is artificially produced by the wearing of concave glasses, about which I wish to ask, Should not an oculist be more careful than he usually is in prescribing or advising patients, when needing colored glasses, to go to an optician, or jeweler, perhaps, to select for themselves? As you well know, it is claimed, and truthfully so, perhaps, that an error in refraction, equal to so low degree as one-half dioptry, is liable to bring on asthenopia, accompanied at times by its kindred—to-wit: epilepsy, chorea, headache, indigestion, etc. Moreover, in the examination of an eye, should we find ametropia equal to this low degree of refraction, we unhesitatingly advise its correction (for fear of eye-strain or its evil effects), even if no asthenopic trouble is realized or complained of by the patient. If this be true, why advise or let a patient, with inflammatory trouble of the eye, wear glasses that will cause or render the eyes ametropic, taking it for granted that they are ametropic to commence with?

Now, I have here a half dozen pair of colored glasses

which were handed me by an optician in response to the question, Will you let me have a half dozen pair of perfectly plain colored glasses? When tested, I find them to be curved-shaped, and one-quarter D. and over astigmatic with myopic focus. I mailed out of this number one pair to an expert optician of Philadelphia, Pa., and asked for its refraction or strength, and the following are his words; "I find the glasses or lenses full of bubbles and scratches, and still they have a one-half cylindrical motion, and a myopic focus of 0.37 D." I also have here a flat or plain pair of smoked glasses which has no refracting power or focus, which I invariably prescribe, and, to my mind, should be the kind advised for those using colored glasses.

In conclusion, I trust some of you who have won celebrity and influence will become interested in this matter, which has for so long lain dormant, and bring about a correction of this great error and evil

Clinical Reports.

A Case of Suppuration. Exostosis and Otitic Epilepsy; Mastoid Trephining followed by Fatal Septic Meningitis.*

By B. ALEX. RANDALL, A. M., M. D., of Philadelphia, Pa.

PROF. OF OTOTOLOGY IN THE UNIVERSITY OF PENNSYLVANIA, AND THE PHILADELPHIA POLYCLINIC, ETC.

In February of this year, I saw, in consultation with Dr. Jas. Hendrie Lloyd, a young man of 30, who gave a history of nearly incessant otorrhœa on the left side; scarlatina in childhood. The discharge was generally scanty, and at times did not flow out, and occasional syringing was able to keep the ear free from odor. The hearing had long been practically lost, but with full use of the other ear, was little missed. There had recently occurred, with increasing frequency, attacks in which he had fallen unconscious—the only one carefully observed commencing with a sudden spring to his feet, clasping his hand to the left ear with ex-

* Read before the American Otological Society in Washington, September 22nd, 1891.

clamation, "O God, my ear," reeling two or three times to the left and falling unconscious. Recovering shortly, no discomfort of the ear was present, nor had he any recollection of the attack or any aura.

Examination showed the hearing normal on the right for voice, watch, and tuning fork, with slight retraction of the drum-membrane and undue injection of its vessels. On the left, the canal was almost closed about half way in by an exostosis arising by a broad base from the lower posterior wall, and the narrow chink was filled with muco-pus, partly inspissated. Syringing brought away considerable epidermal debris from behind the exostosis, but more was seen to remain, and could be but partially dislodged by probing and renewed use of the syringe. The patient flinched badly at any touch, and the surface of the nodule seemed hyper-sensitive. On the following day, after boric insufflation, the chink was less narrow, cleansing was more complete, although increased sensitiveness was complained of, and granulations could be seen in the region of the short process. No perforation was visible, but fluid passed into the pharynx in syringing, and inflation blew out the boric powder without whistle. He had long been able to blow smoke out through this canal. I communicated my finding to Dr. Lloyd, with the suggestion that ether might be necessary to complete the cleansing and exploration; and that if cholesteatoma were present, operation would be indicated.

He returned two months later with further increase of his epileptiform attacks, in the two latest of which he had rotated three times to the left before falling, and had distinct convulsive movements of the face, arm, and leg of the right side, occurring in the order named. While still unconscious, he picked constantly at the left ear. He made no complaint of the ear which showed an epidermal flake closing the chink, and a little more epithelium beyond. The small, red granulations were still present above. Mastoid trephining was advised as an exploratory measure, to be pressed further if indications appeared. The patient was an inebriate, and had for several years been incapacitated from business; but his temper and mental condition seemed to be growing worse.

Operation was agreed to by the patient and his friends, and he was admitted to the Polyclinic Hospital for a week of abstinence and watching before the trephining. No further attacks occurred; his temperature and functions were about normal; his eye-grounds and fields showed no

decided abnormality, and his hearing remained the same; loud voice heard with difficulty, the tuning-fork at two cm., Rinne negative, but the sound lateralized to the left from the vertex only when the canal was closed. The diagnosis was: Disease of the attic and antrum, probably, cholesteatomatous, with slight involvement of the labyrinth and adjacent meninges.

The operation was done under ether on April 25th, with the assistance of Dr. John B. Deaver, and in the presence of Drs. Lloyd, Roberts, Morton, Freeman, and others. The side of the head had been shaved, thoroughly washed, and a bichloride moist dressing worn for twenty-four hours, as there was a scar in the temporal region caused by severe cutting from the explosion of a bottle of gun-powder in boyhood, which might require exploration. Investigation showed this to be so superficial, however, that it was deemed needless to explore. The mastoid was freely uncovered by a three inch curved incision half an inch back of the auricle, and as its surface proved very hard, a fifteen mm., trephine was used to penetrate the outer table. Previous measurements of the head, had proved the patient decidedly brachycephalic (187:153, with an inter-mastoid breadth of 140 mm.); so although the operation was on the left side, a low middle cerebral fossa, and an anterior sinus was to be expected, according to Kørner. The trephine had been placed higher than desired by reason of slipping; so it was laid aside before the button was loosened, and the removal completed with the chisel. No pus or pearly mass was found in the apparently healthy and slightly pneumatic mastoid, and the wound was carried deeper with the gouge until the antrum was freely opened. Here bare bone was felt in all directions, but no collection was present; irrigation passed freely into the canal and somewhat to the throat, and as no indication for further penetration could be found, the wound was packed with bichloride gauze after dusting with aristol, the canal packed with boric powder, and a bichloride dressing applied with firm pressure.

No decided reaction followed; there was little pain to disturb rest by day or night, the dressings were but slightly stained with bloody serum, the packing was generally odorless, and gave ready exit to all secretion, and irrigation passed freely. I left him on the eleventh day to attend the American Medical Association, directing that the dressing should be changed in forty-eight hours, and could then remain the forty-eight hours until my return. His condition

seemed entirely satisfactory, except that the uncovered bone in the wound seemed very slow to granulate.

Returning on the fifteenth day after the operation, I found my patient not so well. He had suffered quite severely with a colicky attack, for which no indiscretion could be found as a cause, and change of dressing revealed a moderate quantity of pus in both canal and wound. That afternoon, there was a sudden rise to 101° of the temperature, which had been about 99° for several days; and the next day he complained of great tenderness at the angle of the jaw on the left, with pain greatly increased by any swallowing. There was some redness and swelling, and the mouth could not be opened wide enough to show the condition of the tonsils. No mastoid tenderness or change in the wound, and on deep palpation, no evidence of jugular involvement. The bowels were confined, the tongue coated, and the patient restless and anxious. Calomel was given every hour in one-fourth grain dose. Ichthyol ointment was used freely over the painful region, a fever mixture given, and sulphonal as a sleeping draught. The temperature fell to normal, and the neck grew less troublesome; but severe headache set in, and the bowels could not be evacuated. Dr. S. Solis Cohen kindly saw him in consultation with me, and found some gurgling, with tenderness in the iliac fossa, and a few atypical rose spots, but doubted if it were typhoid. Dr. Lloyd also saw him, and agreed that the mischief was probably meningeal. On May 12th, there was subnormal temperature without notable rigor, followed by a rise to 101° , then a fall to normal on the following evening, as the bowels were at last moved by repeated doses of croton oil; but from this time, the rise was higher each day, with marked fluctuations. There was little nausea, but the tremulousness of the preceding days increased to marked subsultus; the headache was as much complained of when the patient was aroused, and restless stupor grew more heavy and unbroken. The eyeballs were rolled up, but had good movement in all directions; the pupils were equal and mobile, and the eye-grounds showed only some fullness, and perhaps, tortuosity of the veins. On the 14th, slight facial palsy of the left side appeared, with ptosis, unequal pupils (5:4), and conjugate rotation of eye and head to the left. All evidence of trouble below the mastoid had disappeared, and only some stiffness of the left sterno cleido-mastoid remained; there was also rigidity of the muscles of the back of the neck, with slight opisthotonos. The delirium and

convulsive twitching were incessant, the stupor heavy, and the temperature shooting above 105° at times in spite of the steady application of the ice-bag to the head, and frequent cold or even iced spongings of the arms. Milk was well taken from a glass; his fever mixture and calomel given without difficulty, and the sphincters were under full control. The pulse was full and strong, rising above 110 only as the result of severe convulsive disturbances; the respirations irregular, but little hurried. Desperate as his condition was, the strength seemed great, and recovery not utterly hopeless. The wound was doing well, with only a trace of pus, and the superficial portion healing nicely. Brief snatches of quiet sleep were also gained.

From this time, however, the decline was rapid. On the afternoon of the 18th (twenty-one days after operation), there was unconscious evacuation of the bowels; slight convergence appeared, with increased nystagmic motion, due to paresis of the right externus, and some vomiting of his medicine began. During the night, his free fluid stools became blood-streaked; so the calomel was replaced by mercurial inunction; but the bleeding continued sufficient to stain every cloth with bright red clots or spots. The temperature rose to 106° , partially controlled by cold spongings; coma deepened; the respiration grew more irregular and labored, with increased frequency of the pulse, and he died on the afternoon of the 18th, the twenty-third day after the operation.

The autopsy was made four hours after death, with the assistance of Drs. Lloyd, Lincoln, and Resident Physician Dr. Baldwin. The body muscular, well-nourished, and with little rigor mortis. The scalp showed intense engorgement and oozed many ounces of dark blood during the examination. The skull-cap was normal, rather strongly adherent, with no lesion at the site of the old scar in the temporal region. The dura seemed normal at every point, the meningeal sinuses rather gorged, but free from clots, and the arachnoid fluid little increased. There was marked subarachnoid purulent effusion and some œdema over the entire convexity, and to a less extent at the base of the cerebrum, with no other gross lesions. The brain was firm—its ventricles moderately distended, its vessels full, but no notable lesions, recent or old, could be found in Dr. Lloyd's careful study, except the purulent effusion of the surface. The temporal bones seemed normal, without even discoloration of the dural covering; there was no trace of thrombo-

sis of lateral sinus or jugular, and dissection proved the surfaces everywhere normal except at the canal and at the site of the open wound. The posterior half of the attic, with the antrum, was denuded and slightly eroded; the malleus-handle was lost, and the stapes freed by destruction of the shank of the incus. The round and oval windows seemed normal, and slight accidental violence dislocated the stapes into the vestibule. The external canal was nearly closed by the broad-based exostosis of eburnated tissue (Fig. 1); and only a little epidermis was found beyond it on clearing away the soft tissues from the surfaces. The drum-membrane was occupied by a large round perforation (Fig. 2), the upper



FIG. 1.



FIG. 2.

margin of which was new formation. The mastoid wound showed healing of only its upper superficial part, the bone-sinus being but imperfectly covered with granulation. The antrum was opened completely by the operation, without injury to the facial canal or labyrinth; but the trephine opening having been placed too high, was dangerously close to the cerebral fossa, and not far from the lateral sinus. The right lateral sinus was more anterior and external than the left, making a much more dangerous bone on that side than the one which I opened. The thoracic organs showed old lesions; the pleuritic adhesions being extensive and strong, and the lung apices filled with marked contracted cicatrices, apparently the result of the healing of cavities. The heart was apparently normal, with perfectly closed septum (he had been a "blue baby" for months after birth). The abdomi-

nal organs seemed healthy, as far as studied ; but the examination had to be cut short before the intestinal tract was laid open, and the source of the bleeding determined.

Several points received little light from the operation or the autopsy. The evidences of localized brain-lesion were uncertain up to the time of the trephining, since the temperature and functions were generally nearly normal, with only such abnormality as would be accounted for by the chronic carious process in the tympanum. Bromide was given in small doses during the week before operation, and to a less extent afterward ; and to this may be due his immunity from further epileptiform seizures, none of which occurred while he was in the hospital. The pressure of the exostosis, or of collections beyond it, does not seem to afford adequate cause for such attacks, since there was little evidence of such pressure at the time when they occurred ; so the labyrinth would seem the seat of the irritative process, were it not for the convulsive movements, which seemed to point to the cerebral cortex. At the autopsy, the recent meningial process totally masked any pre-existing cortical lesion ; and nothing could be found of older date than what appeared on most of the brain-surface to indicate previous involvement of the motor centres disturbed. The labyrinth, so far as investigated macroscopically, does not furnish any explanation of the symptoms ; but I hope, by microscopical investigation, to determine its condition more fully and accurately than was possible by simple dissection.

So far as the case is open to my present comprehension, the epileptiform attacks were due to localized carious inflammation in the tympanum, reflexly irritating the labyrinthine and cerebral structures. As to the fatal issue, which seemed in no way imminent before the operation, and for which the uncovering of bone in the tympanum does not furnish adequate explanation, I can ascribe it only to septic absorption through the open bone along the trephining track, but fail to see what additional precaution should have been taken in order to avoid such a result.

1806, *Chestnut Street.*

A Case of Melano-Sarcoma of the Anterior Portion of Eyeball.

By THOS R. POOLEY, M. D., of New York,

PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC, SURGEON-IN-CHIEF TO
THE NEW AMSTERDAM EYE AND EAR HOSPITAL.

The development of malignant tumors on the anterior parts of the eye are of rare occurrence, and involve questions of a practical nature when they do occur, which makes it worth while reporting the following case:

H. L., a German, æt. 47, consulted me October 18th, 1890, about a growth on his eyeball, which he said first began to make its appearance three years ago as a small black spot at the inner angle of the left eye, and had steadily increased in size until it had reached its present dimensions. The growth of the tumor was unaccompanied with pain or any unpleasant symptom other than the sensation of the presence of a foreign body in the eye.

S. P.—Beginning close to the lachrymal caruncle is a coal-black tumor, about four to five mm. in length, very much resembling in shape a leech, the thick part lying towards the inner angle and the tail growing in the direction of the conjunctival cul-de-sac.

Upon the lower sclero-corneal margin is another tumor, but not pigmental, raised from the surrounding surface about one-and-a-half to two mm. in length, and extending for about one mm. into the corneal tissue. The pigmental part of the growth was freely movable upon the sclera, while the non-pigmental part did not seem to be very intimately blended with the sclera nor cornea. The fundus oculi was normal— $V = \frac{20}{40}$, while in the right (the good eye) it was only $\frac{20}{300}$, due to exclusion of this eye from strabismus—amblyopia exanopsia.

Only the day before the patient came to my office for my opinion, I saw him at the New York Ophthalmological Society. The case was then considered to be one of melano-sarcoma, and the majority of those then present were in favor of enucleation of the eyeball, and complete evisceration of the orbit—an opinion which I did not share, for I thought the tumor could be removed without sacrificing the eye. In this view I was more confirmed when I examined the

case more thoroughly for myself, and demonstrated it to my class at the Polyclinic. I advised that the removal of the tumor should be undertaken, with the intention of saving the eye, but with the understanding that permission should be given me to enucleate it should the extension of the growth seem to warrant it. I was the more determined to save the globe, from the fact that the vision of this eye was very much better than that of the sound one.

The patient, however, did not return to me, and it was some time afterwards when I learned from Dr A. B. Mathewson, who reported the case to the New York Ophthalmological Society, that he had succeeded, without difficulty, in removing the entire growth, with preservation of the eye, and that, as yet, there had been no return.

In support of the position assumed by both Dr. Mathewson and myself, that the attempt should be made to save the eye, I conclude with a quotation from Virchow, *Geschwülste*, B. ii, page 122 and 279, to be found in Schweigger's *Hand-Book of Ophthalmology*, English edition, Translated by Porter Farley, page 325:

"Melanoma and melano-sarcoma of the eye develop usually upon the margin of the cornea, and it is generally only at this place that they are firmly attached to the wall of the eye; posteriorly, they are continuous with the conjunctiva, and movable with it upon the sclera; anteriorly, they grow over the cornea, and may thus entirely destroy vision, while the eyeball presents only the appearance of a tumor projecting from the palpebral fissure. Nevertheless, the extirpation of the eye should not be immediately resorted to, since the removal of these tumors from the sclera is not difficult, and they do not penetrate into the *substantia propria* of the cornea. They may, therefore, be easily peeled off, leaving only an unevenness of the epithelium, which soon becomes smooth. At the corneo-scleral boundary, the place of origin of these morbid growths, the extirpation must be made with great care and thoroughness."

107 Madison Avenue.

The Superior Maxillary Removed from a Pregnant Woman.

By J. I. DARBY, M. D., of Columbia, Ala.

On the morning of April the 5th, 1891, Susan Sanders (colored), aged 23 years, single, presented herself, in company with her sister, at our office, to consult Dr. Oscar Dowling and myself concerning a tumor of considerable size in her mouth, which had first been noticed about two years previously, and now filled the oral cavity more than full, extending back into the fauces, and a portion of it protruding out between the lips, thus preventing her from talking, eating solid food, or even drinking liquids of a thick consistency, and giving her a most horrid personal appearance. Her sister, who came to our office with her, stated that this woman had always enjoyed good health up to the beginning of this trouble, and said that there was no specific blood trouble in her family, so far as she ever knew—all the other members having been free from any malignant disease.

The beginning of this tumor was a decayed jaw tooth, which was allowed to remain in the mouth and rot out piece-meal, thus keeping up a constant irritation for a long time.

The case was clearly one of osteo-sarcoma, and nothing but a radical surgical operation could be thought of as a means of even temporary relief to the patient; and there being no manifest contra-indication to the operation except her feeble and emaciated condition, after learning from her sister that she was regular in her menstruation, having just a few days previously menstruated at her regular time, we decided that as she was rapidly losing strength from starvation, that the operation had best be performed at an early day; so we set the following Tuesday as the time to remove the tumor and superior maxillary.

We gave the patient some cathartic medicine to clear out the alimentary canal, and advised her to only drink a little coffee on the morning of the operation; and as she was wholly unable to eat solid food, I presume we got this command obeyed.

When the day appointed arrived, the patient was on hand, with a considerable number of her friends, who came

along to witness what they thought would be the last of *Susan Sanders*.

Every preliminary having been arranged, the patient was placed on the operating table and the anæsthetic commenced, when, upon carefully noticing, her abdomen was observed to be too large, and a careful investigation revealed the fact that, notwithstanding her horrible personal appearance, and the statement made by her sister that she was menstruating regularly, she was pregnant with a viable fœtus. Of course this caused us to call a halt in our proceedings, and discuss the propriety of proceeding with the operation. We found out that she had reached the sixth month of utero-gestation, and the osteo-sarcoma was rapidly growing in size, and was already starving the patient.

After discussing the matter for some time, and seeing her emaciated condition, we decided it might be better, under all the circumstances, to proceed with the removal of the superior maxillary.

So we proceeded to give her ether, which was taken rather badly on account of the tumor pressing back into the fauces and interfering with the respiration, and making it very difficult to sponge out the secretions, which accumulated very rapidly; but we finally succeeded in anæsthetizing her, and proceeded with the operation by commencing an incision just below the inner canthus of the eye, and carrying it down by the nose, under the alæ, and through the median fissure, cutting to the bone as we went. A second incision was commenced at the same point where first one was begun, and carried back under the eye to a point one inch in front of the ear, thus surrounding all important blood vessels and nerves. The tissues were easily dissected back, and the tumor well exposed. We next extracted an incisor tooth; and by placing one blade of a bone forceps in the nose, and the other in the mouth, easily cut the superior maxillary; then, with a chisel and mallet, we cut the bones of the face, and, with lion-jawed forceps, removed the tumor, which, when removed, weighed a little more than three pounds.

The hæmorrhage was controlled by placing hot sponges in the wound for a few moments; then all blood-clots were thoroughly removed, and the tissues brought in apposition and retained by cat-gut sutures, over which was placed a dry antiseptic dressing of bichloride gauze.

I omitted to mention, at the proper place, that we thoroughly washed and scrubbed the face and neck of this patient with bichloride solutions before proceeding to operate.

The patient rallied readily from the anæsthetic and shock of the operation, and was taken from the room in good condition in a little more than half an hour after commencement of operation. But in such cases as this I never operate against time, it being far better, in the great majority of cases, to take plenty of time and do the work carefully than it is to get in a splutter and drop instruments, knock over solutions, and scare everybody in the room out of their wits.

We let the primary dressings remain on for six days, carefully watching the patient's temperature, which did not, at any time, exceed 100°. When the dressings were removed for the first time, the wound was found to be healed by first intention, with not a single drop of pus in its entire course, nor had the patient experienced the least degree of disturbance of her pregnancy, which went on up to the full period of utero-gestation without the least symptom of disturbance, and was delivered of an 8-pound child without any difficulty whatever.

Now, I have not reported this case for the purpose of advertising any peculiar technique in the operation, for it was done by the method laid down in Wyeth's Surgery, and is the operation done by all surgeons in cases where the tumor is as large as this one was; but my reason for reporting it is to contribute my little mite of experience in operating upon pregnant females, as it is often a vexing question with doctors in similar cases. There has been no symptom of a return of the tumor, but of course I shall expect it to do so sooner or later.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

Correspondence.

Impressions made by Southern Surgical and Gynæcological Association—Progress—Bungling Surgery—Conscientious Surgery—Prompt Surgery Often Demanded—Cases of Ectopic Pregnancy.

Mr. Editor:—All present at the recent Richmond, Va., meeting of the Southern Surgical and Gynæcological Association, will enjoy Dr. Ross' very excellent and appropriate tribute, in the "*Canadian Practitioner*," to that representative body of Southern doctors. The meeting had all the glow and warmth of genuine Southern hospitality. Welcome was in every hand-shake and at every door. Most prominent among the mental portraits we will carry with us and prize the most will be those of Dr. McGuire, with his great experience in the profession in which he has rendered such valuable and honored service, his pleasing simplicity of manners and royal hospitality; and Dr. Emmet, one of the great masters, whom we all delight to honor. All the papers and discussions by old and young bore marks of careful and industrious research, and evinced the earnest and absorbing conviction, that while much had been learned, there was yet much to learn.

The free and bold use of the knife in our societies upon our own and old errors is instructive practice. Our brothers of another learned profession have had the temerity to amend the old statutes of Moses; have even made penal some of the procedures of the wise old Solomon. Their spirit of innovation finds few critics. Whatever has been good in the surgery of our own or other generations—giving the most successful results—we gratefully accept as valuable lessons of guidance. But blind imitation is not intelligent discipleship. Our possibilities of improvement in no one of the departments of our profession have been exhausted. It is yet possible, with all our marvelous progress, to engraft new ideas in our science and art.

There is no bigotry so bold as to assert, "I have the only perfect way." Our expressions in societies and elsewhere, may, to some, seem offensive. We attack specially no man's individual work. The specialist is identified with a very difficult and responsible work. If fit for his work, he has a keen appreciation of the value of a human life. Mixed groups of cases come into his hands—many of them remaining ill from incomplete or imperfect operations. Expressions as to this class of cases may sometimes seem offensive. It requires a strong self-restraint to deal patiently and without irritation with something primarily easy, and now thrice complicated. In referring to this class of cases, we cannot, as many do, commence with a complaint and end with an apology.

We find it difficult to avoid a fierce earnestness when we come to consider the needless complications brought about by bungling surgery. We always assume that those whom we address are not afraid of, but seek the facts. That should not be regarded as offensive, which, we hope, with all due modesty, with all earnestness and sincerity of conviction, is urged in the line of the correction of errors, and the adoption of methods of procedure, which have been followed by an almost unbroken line of successful results when followed by experienced and skilled men. Every conscientious surgeon is a sincere learner, and success follows closest upon the steps of the operator who dares and persists in the endeavor to discover the best methods, determining their value by results. It is a proud fact, that the older and more experienced men of the profession, men with grand records, join hands with the younger ones to weed out the timid cobblers infesting the field. Every skilled operator's per cent. of mortality is increased by the bungling apprentice practice of these men—a fact not calculated to cultivate an amiable tolerance. Such men properly belong behind the trenches of conservatism where they can throw stones. They will be safe there, "intrenched in its immense redoubts, with Himalah for its front, and Atlas for its flank, and Andes for

is rear, and the Atlantic and Pacific seas for its ditches and trenches—which has flaunted its crescents, signs and badges of possession over every rood of the planet.” Must we all, with uncovered heads, hats under our arms, and with bended knees, bow reverently before this venerable Colossus?

The discussions in our societies will go far in impressing the fact, that the successful surgeon must largely carry his resources within himself—that it is his own strength, skill, and character that is to be taxed in every case to which he is called. And further, that there can be no good surgery where there is not a quick professional conscience, a high moral motive directing. Conscientiousness is auxiliary to the surgeon’s success. These the surgical cobbler lacks; he wantonly experiments with human life. There is no conscience behind his clumsy ventures.

The report of the following cases indicates some of the difficult work we encounter; the complications arising from delay or the tinkering of ignorance—often both.

CASE I.—Wife of a physician; married eleven years; strong, healthy woman, perfectly regular in catamenia. Never had a miscarriage or abortion. Gave birth to a child at full term. Twenty months ago had a rather protracted labor; has menstruated regularly since. Last date of menstruation February 24th. On the morning of March 29th, she was seized with severe paroxysms of abdominal pain, which were immediately followed by collapse. On the 4th of April, the second paroxysm occurred. On the 5th, the third; and on the 8th, the fourth and fifth, each of which was followed by collapse. On the 9th, abdominal section was performed for ruptured tubal pregnancy. Abdomen full of fluid blood, ruptured tube, and gestation sac. Irrigation followed by drainage—recovery.

CASE II.—In the practice of the same physician six months later, at midnight. Physician summoned in great haste to see a lady in collapse following paroxysm of severe pelvic pain. He diagnosed ruptured ectopic pregnancy, and placed the patient on a stretcher in an express car, and sent her to Philadelphia for a section that followed early next morning. I found a ruptured gestation sac on the right side, still bleeding freely. Abdomen full of fluid blood.

In neither of these cases was there any of the usual ob-

jective signs. Uterus in position. No perceptible distention in the region of either ovary. The symptoms were strictly characteristic ruptured tubal pregnancy. A delayed period in the first case followed by severe pain and symptoms of concealed hæmorrhage; in the second case, the characteristic pain, and symptoms of concealed hæmorrhage, acute anæmia, and swooning. Both saved by prompt surgery.

The last case completes a series of sixty-one abdominal sections for ectopic pregnancy, with two deaths, both due to delay and inexperience in the surgery of the subject. The two deaths occurred in the first eight. Fifty-three consecutive cases since without a death. Many of the group were greatly complicated by delay and by treatment for troubles that did not exist.

JOSEPH PRICE, M. D.,

Preston Retreat, Philadelphia, Dec. 16th, 1891.

Proceedings of Societies, Boards, etc

TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA, AND TENNESSEE.

Third Annual Meeting held in Chattanooga, Tenn.

FIRST DAY—October 27th, 1891—MORNING.

The Society was called to order by Vice-President Dr. E. T. Camp. The meeting was opened with prayer by Rev. D. Vance Price.

The Committee on Necrology presented resolutions on the deaths of Drs. T. P. Gary, of Florida, W. B. Wells, and W. P. Craig, both of Chattanooga, which were adopted.

After reports of committees and the transaction of some miscellaneous business, Dr. E. E. Kerr read a paper reporting—

A Case of Neuro-Mimetic Hip Trouble

And presented the patient. The diagnosis of gonorrhœal rheumatism had been made, but Dr. Kerr was unable to see the case in that light. The nervous symptoms and the fam-

ily history indicated a nervous element, and there was undoubtedly a hysterical element in the case. A partial cure was effected by suggestion, but the patient still walked on his toes, for which the doctor could see no reason, as there was no shortening nor tenderness about the hip, or other signs indicating organic disease.

Dr. Trippe said that he had treated the case before Dr. Kerr. The patient had had gonorrhœa four weeks before he saw him. There was increased temperature (102° to 104°); there had been two marked chills, and the typical picture of gonorrhœal rheumatism, although a hysterical element was recognized in the case.

Dr. Reeves thought the case one of involvement of the cord, in which there was an attack of gonorrhœa, and that this set up a new train of reflexes. He called attention to the fact that every discharge from the meatus was not a gonorrhœa, and as a test, he stated that the discharge from a specific case was acid, while that from a non-specific was alkaline.

Dr. J. S. Cowan thought the history as given by Dr. Trippe indicates some specific trouble; and if most of the members had seen the case, it would have been diagnosed as gonorrhœal rheumatism. Where we have such a specific trouble, and a history of masturbation as here, we would expect some hysterical symptoms. A man may have hysterical joint, just as a woman may have the globus hystericus.

Dr. Drake, from the history and examination of the patient, thought the case one of gonorrhœal rheumatism. When there is a pain, there must be a cause, past or present.

Dr. Kerr had nothing to say as to the condition before he saw the patient. He agreed that where there were neurotic symptoms, it was difficult to make a diagnosis. He had brought the patient so as to find out how to make him stop walking on his toe, for which he could see no cause.

Afternoon Session.—The President, Dr. Robert Battey, presided.

Dr. E. T. Camp, of Gadsden, Ala., read a paper on

The Summer Diarrhœa of Children—Its Relation to Elongated Prepuce—Cured by Circumcision,

In which he gave the causes: (1.) Improper food. (2.) High temperature. (3.) Micro-organisms. In some cases, there was a neurotic element. He reported one case where the diarrhœa was cured by circumcision—there being no change in the other treatment.

Dr. Battey asked if any of the members had any experience that would confirm the views of the writer that the prepuce might keep up the diarrhœa.

Dr. Gahagan had a case of persistent diarrhœa in which there was an elongated prepuce. He would circumcise the case and report next year.

Dr. Cowan had not noticed that male children were more subject to diarrhœa than females. There was often fault in the diet, both as to quality, and especially quantity.

Dr. Berlin called attention to the fact that Jewish children have diarrhœa as frequently as Gentiles; he could see no connection between a stomach loaded with bacteria, and an abnormal prepuce.

Dr. Reeves said that there was no specific cause or specific origin.

Dr. J. L. Atlee confirmed the experience of Dr. Camp. He had seen cases in which after circumcision the diarrhœa began to improve, with no change in the other treatment.

In closing, Dr. Camp said that he had reported but one case in his paper, but he had seen a number of others in which there was a like result following circumcision.

Dr. George Wiley Broome, of St. Louis, read a

Report of a Successful Case of Kolpo-Hysterectomy, Including a Brief Review of the Present Status of the Operation

In which he advocated the operation in all cases of epithelioma or carcinoma of the cervix or the body of the uterus, regardless of the extent of the disease. Amputation of the uterus should never be performed.

Dr. W. E. B. Davis' experience had been that these cases, when sent to him, were too far advanced to justify operation. He had not been convinced where but a limited part of the cervix was involved, that an amputation was not as good as the radical operation. Many cases were morphine eaters, and the condition of the intestinal tract was one of importance.

Dr. Berlin thought the total extirpation was better than high amputation. When the disease had passed beyond the uterus, it was too late to amputate in any way.

Dr. Battey had grave doubts as to the advisability of operation. In the early stage, diagnosis is difficult. In some of the cases sent him as cancerous, cures were effected by the application of iodine, etc. Of the cases reported cured, he had grave doubts as to the diagnosis. On the other

hand, there were many deaths after the operation, if not immediately, within a short time. As in the case of Governor Hill, many will not consent to an operation until a malignant growth has advanced beyond the stage when it can be removed.

Dr. Key preferred the clamp to the ligature. Early diagnosis is of importance, and this can only be made by an expert pathologist; but as soon as made, the uterus should be removed.

Night Session — Addresses of Welcome were made by Dr. J. R. Rathmell, President of the Chattanooga Medical Society, and Col. Garnett Andrews, Mayor of the city. Dr. Robert Battey responded on behalf of the Society.

Dr. Geo. R. West reported—

Ten Cases of Laparotomy with One Death.

Three of the laparotomies were for the removal of diseased ovaries and tubes; one for the cure of oöphoro-epilepsy; one for the removal of ovarian cyst; three for the relief of symptoms caused by uterine fibroma; two were exploratory incisions. Of the nine recoveries, six were perfect cures, and three were partial cures from incomplete operations.

Dr. Davis said that it was the improved technique that gave success in these operations, which required not only book knowledge, but also special training.

Dr. Broome advocated early operation. He insisted on sterilizing the instruments, and endorsed Arnold's sterilizer. Morphine should never be given after a laparotomy.

Dr. Reeves felt grateful to the author for his remarks on conservatism. He quoted Weir Mitchell, who said that in his experience he had sent thirteen cases to the surgeon. Five of these were not improved. Dr. Gardner had said that the majority of cases operated on were not any better five years after the operation.

SECOND DAY.

Opened with prayer by the Rev. J. W. Bachman.

After some miscellaneous bustness, Dr. Robert Battey addressed the Association on—

Ovariectomy—Its Use and Abuse.

He said that the fundamental idea in the operation he had devised was to produce rest. The difficulty of curing many chronic diseases lies in the fact that rest is an impossibility to an ovary during the menstrual age.

The objects of the operation are: (1st.) The prolongation of life. Years ago, Sir Spencer Wells said that he had added 300 years to the sum of human life; now it is probably double that. (2nd.) The restoration of a disordered mind. There is a prejudice against the operation, owing to the fact that cases have not been properly selected, and alienists want the ovariologist to cure their cases after they have exhausted every other means of cure when it is often too late. Dr. Goodell had asserted that an insane woman had no business with children. Dr. Battey would hardly go so far. (3rd.) The cure of epilepsy. As in the case of insanity, there should be some connection between the epilepsy and the ovaries. It does not follow because a woman has epilepsy, that her ovaries should be removed. Here Dr. Goodell had good results. (4th.) The relief of intolerable pain—especially when the pain has a tendency to produce that detestable habit—opium eating—a habit little short of insanity. Where the habit has been formed, the operation will cure the case, if the woman can break the habit.

One of the abuses of the operation is to perform a single operation for the sake of the notoriety it would bring. This operation ought to be considered a specialty as much as eye diseases. Success depends on the skill of the operator, which can come only from experience. It depends also on the native ability, and every man should study his natural talents in the light of statistics, and choose the field where he is most successful.

The operation of ovariectomy to stop child-bearing is a detestable practice. It should never be done without ample consultation—first, to protect the physician; second, in the interest of the profession at large; third, in the interest of the patient.

Dr. Davis thought that as much could be done by simply incising the muscle as by a normal ovariectomy. The operation has no place in the treatment of nervous diseases.

Dr. Broome suggested that as it was well known that ovariectomy produced atrophy of fibroid tumors by cutting off the blood supply, therefore ligation of the uterine artery might produce as good results.

Dr. Reeve said that he regretted to hear Dr. Battey's declaration, that he had written his last paper for the medical press, also for medical societies; and that we should, therefore, be compelled to rely upon our ears and recollection of his contemporaneous teaching on this occasion, instead of

the usually prepared Presidential Address. While paying a high compliment to the distinguished speaker, claiming him as another of our Southland jewels, he seriously questioned the value of "Battey's Operation," so-called, and expressed the fear that more harm had been done by it than good to woman and the human race. He mentioned the fact of his attendance at the Triennial Medical Congress in Washington the week before, where, in the Association of American Physicians, he had heard the "Criminal Side" of the operation discussed by such men as Lusk, Weir Mitchell, Gairdner, of Glasgow, Scotland, and other gentlemen of great distinction; and a timely halt was then and there called to the present craze for "belly ripping." He confessed himself as having been startled by Dr. Battey's remarkable utterance in answer to sundry questions—namely: "I don't care for science, nor the advancement of science. *My object is to relieve human suffering; and as long as women are fools enough to come to me, I will be fool enough to operate upon them.*"

Dr. Wilson advocated the operation in cases of mania. He did not believe that insane women should have children.

To confirm Dr. Battey's views, Dr. Cowan reported a *case of epilepsy cured by the operation.*

Dr. Battey, in closing, gave the indications for the operation—viz: (1st.) The case must be desperate; (2nd.) It must be incurable by ordinary means; (3rd.) There must be a reasonable hope of cure. In the last two years, he had advocated the removal of senile, diseased ovaries for the cure of insanity,, citing cases.

Dr. W. E. B. Davis, of Birmingham, Ala., read a paper entitled—

Treatment of Inflammations About the Head of the Colon.

The cases must be selected for the operation. Important symptoms must not be masked by the administration of opium. More reliance should be placed on regional tenderness than on the temperature. An inflammation about the head of the colon is nearly always an appendicitis—the involvement of surrounding tissues being secondary. Early operation is necessary.

Dr. Cunningham was of the opinion that the whole question should be rewritten. The peritoneum is always involved to a limited extent.

Dr. Shimwell said that the temperature may not be in-

creased, and related a case confirming the statement. There is no rule when to operate; each case must be judged on its own merits.

Dr. Karl von Ruck, of Asheville, N. C., read a paper on—

The Cure of Tuberculosis on the Principle of Nutrition.

He said that the diagnosis with the microscope could not be made in the early stage. No one measure should be relied upon in the treatment. He was surprised that greater harm had not been done by the large doses of tuberculin that had been used by some experimenters. In the early stage of tuberculosis, the treatment was often inefficient, when the cases could be cured. Climate is of importance, and all measures that could benefit the patient should be employed.

Dr. Reeves advised the use of the microscope in all cases to confirm the diagnosis; if it be not tuberculosis, it is syphilis. Primarily, the disease is due to lymph stasis.

Dr. von Ruck called attention to the fact that in the early stage there is no sputum and no bacteria; so that the diagnosis cannot be made with the microscope.

Dr. J. C. Shepard, of Winchester, Tenn., read a paper on—

Milk Sickness,

Stating that the disease existed only in a limited area, and that it was contracted from the cow. The poison seemed to be neither animal nor vegetable, but mineral. The disease called "trembles" in the cow resembles lead poisoning in man.

Dr. Cowan said that the subject was of so much importance that the Government had offered a reward for the discovery of the cause. He had seen one case, and thought at first that it was one of lead or cobalt poisoning.

Dr. Reeves said that the bacteria had been found—that they were spirilli—for which quinine was the best remedy.

Dr. J. B. Murfree, of Murfreesboro, Tenn., read a paper on—

The Necessity for Asepsis in Private Obstetrical Practice.

He advanced the idea that it was more necessary to protect the wounded surface here than in an open wound. The increased mortality in hospital practice he thought due to the use of antiseptics. In private practice, cleanliness was necessary, and sometimes antiseptics; especially should the

hands be clean, and the examinations be as few as possible.

Dr. Baxter endorsed the paper in the main, but thought that in private practice the danger of infection ten times as great as in hospital practice. The nurses should be watched, as they know nothing of surgical cleanliness.

Dr. Shimwell thought that the injury to the mother was a factor in these cases that was overlooked. Wherever there has been a post-mortem, great injury to the tissues had been found.

Dr. Cowan thought the great secret was cleanliness, but that antiseptics have their place

In a large number of cases, Dr. Wilson had not found the result any better with antiseptics than with simple cleanliness with sterilized water. The results were as good where the patients were aggregated as where they were segregated. Vaginal irrigation was not necessary, for the cases did as well by simply washing the vulva.

Dr. Cunningham thought, with Dr. Shimwell, that the result was often due to traumatism. He always uses the Credé method of expelling the placenta.

Night Session —At 5 P. M., an elegant reception was tendered the members at the residence of Mr. and Mrs. W. B. Wilson, 329 East Terrace.

THIRD DAY—MORNING SESSION.

Opened with prayer by Rev. Robt. J. Willingham.

Dr. W. G. Bogart, of Chattanooga, read a paper on—

Lacerated Cervix.

He advocated the operation only when there were troublesome symptoms produced by the laceration and other measures fail. He described the operation mainly as laid down by Skene. The causes of failure were imperfect preparation of patient, imperfect operation or imperfect after treatment.

Dr. Camp said that it was necessary to remove all the cicatricial tissue. Silver sutures are the best. Douches are not necessary. He does not endorse the use of ergot after delivery.

Dr. Davis said the paper presented the present status of the operation. The condition requiring it would be prevented by proper attention after confinement. Ergot is of use after confinement, not only to cause contraction of the uterus, but it also closes the mouths of the small vessels and

lessens the danger of septic poisoning. He examines all his patients six weeks after confinement if possible. In subinvolution, the faradic current is of value despite the assertions of many that electricity was of no use in gynæcology.

Dr. Reeves had gotten good results in these cases by supporting the womb with the Fowler pessary, and had cured some by this means. He gave minute doses of ergot after confinement.

Dr. Bogart in closing the discussion, said that he gave support to the uterus in these cases, but that he preferred to do this with medicated lamb's wool tampons, instead of using a hard rubber pessary.

Dr. G. W. Drake, of Chattanooga, presented a paper on

The Physiology and Chemistry of Therapeutics.

He maintained that the infectious diseases are caused by ptomaines or toxines evolved by bacteria in the body. He proclaimed that "chemical antagonism" was "the safest, the most scientific, and most rational means of cure, rather than that of 'physiological antagonism.'" He argued that all bacterial toxines had an antidote for which we should look. The tendency was to return to specific medication along more scientific lines. The age demands rational medicine.

Dr. Purdon called attention to the fact that the antiseptics were used thirty years ago empirically, for he had used the permanganate of potash in cholera; he had also used the peroxide of hydrogen.

Dr. B. T. Shimwell, of Philadelphia, read a paper on *Artificial Arus Anastomosis*.

Dr. John E. Purdon, of Cullman, Ala., read a paper on

The Conservation of Energy in Modern Psychics

In which he claimed that in the face of established facts of mental and physical action at a distance, nothing was left to the physiologist but to acknowledge the existence of an extra-muscular mode of the externalization of energy in relation with conscious or sub-conscious will and design. He held the opinion that the ether of space had its physiological as well as its physical side; and that as the reservoir of the work-doing power of the universe, it bore a relation to the universal life analogous to that which the blood and the nervous system held to the individualized spirit. He based his theory of an ethereal nervous medium upon the results of his own sphygmographic researches, which show the similarity of the pulse traces of individuals *en rapport*,

during extraordinary manifestations of energy, such as "knockings" and "telegraphic influence."

Dr. Purdon deposited with the Secretary photographs of a selected set of pulse tracings, taken by himself in illustration of the above view, and claiming the absolute originality of the method for himself.

Dr. Cowan said that the grandest result of energy was thought. By the arrangement of matter, by the correlation of force, we have this power. This we derive from solar force.

Dr. Cunningham thought that we know nothing about the matter.

Dr. Drake took issue with Dr. Cowan that the original force was solar, for energy existed before the sun was made and came from the Deity.

To this Dr. Cowan assented.

Dr. J. P. Stewart, of Attalla, Ala., read a paper on

Evolution from a Scientific Standpoint.

He advocated the doctrine from scientific considerations.

Dr. Drake said that the reproductive energy in the human ovum was the unseen hand of God, moulding its protoplasm into a perfect form.

Dr. Purdon said that man belongs to a different class from the lower animals. Evolution is true as a formula—as a partial formula.

Afternoon Session.—Dr. Henry Wm. Blanc, of Sewanee, Tenn., gave his experience in—

A Review of Five Years' Dermatological Practice in New Orleans.

He reviewed 2,013 cases seen in public and private practice. Twenty-five per cent. were eczema; elsewhere the per cent. is 30 or 35. Epithelioma in the form of rodent ulcer figured conspicuously in the report. A large number of leprosy cases were reported; many of these were of foreign birth, or children of foreigners. The author believes in the contagiousness of leprosy, but thinks that in many of his cases the disease was contracted from some animal source, as in eating raw meat, or in preparing meat for the table.

Dr. R. M. Cunningham handled the subject of *Croupous Pneumonia*.

A paper was read by Dr. Y. L. Abernathy, of Hill City, Tenn., on *Doctors*.

Dr. W. P. McDonald, of Hill City, read a paper entitled *Legislation*, which was not discussed, as it dealt with matters of a political nature.

Dr. W. C. Townes read a paper on

Angina Pectoris.

He gave, as the conditions in the disease—(1st.) Pseudo-angina pectoris; (2nd.) That form in which there is sclerosis of the coronary arteries; (3rd.) Where there is valvular disease. The treatment depends on the cause. In the first form, we have a neurosis, and we correct anything we find at fault with any of the organs; secondly, we give tonics of potass. iodide, arsenic, nitrites; thirdly, we prescribe during the attacks such drugs as amyl nitrite, chloroform, and opium.

Dr. Drake thought angina pectoris a symptom rather than a disease—sometimes the result of organic lesions, but often merely a cardiac neuralgia. He uses nitro-glycerine with atropia for the pain.

Dr. Purdon gives, as routine treatment, the salicylate of soda where it is caused by cold (lowering of temperature). This is combined with strophanthus to prevent relapses.

Dr. Camp believes it to be due to a rheumatic diathesis, and uses chloroform by inhalation.

Dr. Wert would be afraid to give chloroform, owing to the pathology of the condition.

Dr. Purdon said that by no means must electricity be used.

Dr. Baxter did not think chloroform specially dangerous, and cited cases.

Dr. Cunningham believes in giving atropia and nitrite of amyl. He did not consider an intermittent pulse to contraindicate chloroform.

Dr. Townes closed by saying that he laid much stress on the above treatment.

Night Session.—Dr. B. H. Kuykendall, of Chattanooga, read a paper on—

Bromide of Ethyl as an Anæsthetic,

Advocating its value and safety when given for short operations (one minute), and in doses of not over a drachm. It is given free from air; anæsthesia is complete from one-half to one minute. The effects last about two minutes, when the patient wakes as from a natural sleep. Nausea is seldom produced.

Dr. Davis said that one accustomed to give ether was not safe to give chloroform; and it might be so with this; the deaths may have been due to faulty administration. Ni-

trous oxide was a rapid anæsthetic, and was considered the safest.

Dr. Smith suggested that if the doctor would give the number of cases observed by him it would be of interest.

Dr. Berlin said that an objection was the odor. He related two cases of death from the drug.

Dr. Gahagan asked Dr. Kuykendall for the mortality, how anæsthesia was produced, and the antidote.

Dr. Kuykendall replied that there had never been a fatal case unless the administration was prolonged. Dr. Chisolm had used it in one hundred cases without a bad result. So far as he knew, there had been but two deaths. He did not know how it kills, or how it produces anæsthesia. The antidote is the same as in threatened death from chloroform.

Dr. Willis F. Westmoreland, of Atlanta, discussed

Brain Surgery,

Saying that the surgeons had gone into the brain, where the physiologist had said that they could not go. An exploratory incision into the brain-substance was just as justifiable as in laparotomy. In abscess and tumors, there has never been a cure without operation; where the incision has been thorough, the results have been good. The safeguard is anti-epilepsy, without which there is uncertainty. In operating, the ventricles must be avoided.

Dr. Drake argued that surgeons had never gone farther than the physiologist had mapped out for them. They dare not invade the fourth ventricle in the vicinity of the respiratory centre.

Dr. Westmoreland reminded Dr. Drake that it was not due to the physiologists, but to the fact that some years ago a man had recovered after a crow-bar had gone through his brain.

Dr. Berlin related a case of insanity, coming on after an injury to the skull, cured by an operation, with a relapse, and a second cure by the same means.

Dr. Reeves said that while he had been much instructed by Dr. Westmoreland's eloquent address, he could not help expressing his deep regret that justice had not been done to a distinguished son of Tennessee, whose painstaking labors in the field of brain surgery had laid the foundation for the brilliant demonstrations since made by Victor A. H. Horsley, of London, and W. W. Keen, of Philadelphia. No reference to the literature of brain surgery could be considered complete without the name of W. T. Briggs, of Nashville,

whose original studies and published reports linked indissolubly his labors with the advancement of the science and art of surgery in this our day and generation.

Dr. Crumley believed that all functions were localized. Some areas can be invaded—others cannot.

Dr. Cunningham said that most of these cases would die without operation, and that the surgeon was justified in doing anything that offered the least hope.

Dr. Stewart reported a case of brain surgery where the whole frontal bone was taken away.

Dr. Westmoreland closed by saying that the success depends largely on drainage, and it may be necessary to make a counter-opening.

A paper by Dr. W. L. Bullard, of Columbus, Ga., was read, asking,

Should Not Oculists be More Careful in Prescribing Colored Glasses?

In which he stated that smoked glasses are generally better than colored glasses; and that there was a more serious objection to the curved glasses, for the reason that they possessed some refractive power when we wanted a plain glass.

[This paper is published in full on page 866 of this issue of the *Virginia Medical Monthly*]

The following are the *Officers for the ensuing year*:

President—Dr. W. E. B. Davis, of Birmingham, Ala. (Removed to Rome, Ga.)

Vice-Presidents—Drs. D. H. Howell, of Atlanta, Ga.; J. C. Shepard, of Winchester, Tenn.; and J. P. Stewart, of Attala, Ala.

Secretary—Dr. Frank Trester Smith, of Chattanooga, Tenn.

Treasurer—Dr. B. S. Wert, of Chattanooga, Tenn.

Recorder—Dr. W. L. Galagan, of Chattanooga, Tenn.

Councillors—Drs. J. B. Murfree, A. B. Frix, John E. Purdon, G. W. Drake, J. W. Clements, and E. T. Camp.

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CHATTANOOGA MEDICAL SOCIETY.

November, 1891.—**Ophthalmia Neonatorum**

Dr. Frank Trester Smith read a paper on this subject. [See page 839 of this number.]

Discussion.—Dr. Cobleigh said that in a long experience he had never seen a case of ophthalmia neonatorum, but had seen many cases of catarrhal ophthalmia from the use of soap.

Dr. Kuykendall said that the disease was more frequent in the cities. The gonno-coccus was found in 65 to 75 per cent. of the cases that had been diagnosed by good clinicians as the disease in question. Chlorine water was the best agent in the early stage. Every case can be saved if seen before the cornea is involved.

One of the best authorities, D. B. Roosa, does not use nitrate of silver at all. The use of the bichloride every half hour, if the cornea is involved (1-4000), is good practice. If we can see only the lower part of the cornea, we can judge as to whether it is inflamed or not. If in doubt, treat as if there was an ulcer, but do not use too much force in making the examination, for the reason given in the paper. The use of silver by Knapp's method is not effective, because it does not reach the cul de sac, where it is most needed. In cases where there seemed complete opacity, he had seen surprising results from the use of calomel; but it is difficult to get these cases to keep up the treatment for years.

Dr. Trippe believed in the use of the silver nitrate in strong solutions, and related a case where the two per cent. solution had no effect, and he got no good result until he increased the strength to gr. xxx. ad. ʒj.

Dr. Townes said that the silver may decompose when it comes in contact with the tissues by uniting with the albumen of the tissues and forming the albuminate of silver. A better effect would be produced by cleansing the tissue first.

Dr. Rathmell asked Dr. Smith what he did for the pain in these cases, and in similar cases, in the adult.

Dr. Smith said that he gave anodynes when necessary to the adult, but in the infant we had no evidence that the disease was painful. Under no circumstances was cocaine to be used, as it had a tendency to interfere with the nutrition of the cornea. He wanted to emphasize the use of cold as the main reliance in the treatment, which he had probably not dwelt upon sufficiently in the paper.

Analyses. Selections, etc.

Medical Treatment of Appendicitis.

In an article read by Dr. A. B. Kirkpatrick before the Philadelphia County Medical Society, December 9th, 1891, he justly states, that surgery has made such marvellous advancement, and accomplished such brilliant results of late, that the medical treatment of certain diseases appear to have been eclipsed. The danger is that some of our younger surgeons are too ready to perform abdominal section before they have exhausted the medical armamentarium. Much more frequently than is the case should the surgeon call the physician in consultation. He does not in the least condemn aggressive surgery when it is certain that it is the only or the safest method for the patient. He then reports five cases of appendicitis in his practice, in four of which he *demonstrated* that an operation was not necessary, and all five recovered without section. He includes in the medical treatment of typhlitis everything short of surgical operations, for he relies as much or more on mechanical measures as on internal medication.

Thursday, April 2nd, 1890.—A., aged 13 years, had been constipated a day or two. Father had just recovered from typhoid fever. Calomel powder produced no action, nor did half-bottle doses of citrate of magnesia. Inguinal pain and tenderness increased; some tympanites. Injected tepid soapy water, with a few drops of turpentine without result. On 3rd, drachm doses of Rochelle salts in a third-glass of water every hour for four hours, and tincture hyoscyamus, but no bowel action. Vomiting increased, and tenderness extended. Diagnosis—bowel obstruction, due either to intussusception, typhlitis or perityphlitis. On 4th, A. M. Injections passed through a catheter, not retained. Small doses of morphia. On 5th, growing worse. Abdominal section approved in consultation. On 6th, about 3 P. M., was to have been moved to hospital; but parents objecting, etc., Dr. K. was called in about 10 P. M. Symptoms all indicated complete bowel obstruction and collapse: T. 96.5°; Resp. 40; Heart about 140; in cold perspiration. Abdomen exceedingly tympanitic; bladder much distended; stercoraceous vomiting; nothing had been kept on stomach for days. Dr. K. at once gave hypodermic of morphia, atropia, and strychnia; emptied bladder of about a pint of

urine. Revived somewhat after hypodermic. Had patient supported in knee-chest position about 11 P. M., and injected a warm liquid containing castor oil, turpentine, whiskey, and Epsom salts. This was held in by hand for half hour; and the patient was allowed to lie down on right side. Within an hour, a copious evacuation of liquid with scybalous masses took place. Injection repeated after midnight, resulting in another movement, and relief of tympany and pain. The turpentine and whiskey were given by mouth once in two hours, alternating with a drachm of Epsom salts in hot water. Only the first dose of salts was rejected; the whiskey and turpentine were retained. After his bowels and bladder had acted naturally several times daily, tumor disappeared, etc.; but the patient went immediately into an attack of typhoid fever. He was given three times daily two grains of quinine and one-thirtieth grain of strychnia, with nitro-muriatic acid, pepsin, and bismuth every four hours; a liquid diet, and paregoric to control bowels when needed. On 14th day after Dr. K. first saw him, after some pain and flatus, he passed a slough from the bowel, elliptical in shape, with a long diameter of $2\frac{1}{2}$ inches. The pain and tendency to collapse were overcome by a hypodermic, free stimulation, etc. He rallied the next day, and soon became a strong, healthy boy.

Mr. K. P., prior to March 24th, had noticed gradual decrease in evacuations for several weeks, with abdominal distension and discomfort, when obstinate constipation followed—no movement for several days. Tumor and pain in right iliac fossa; tongue coated. T. $103^{\circ}50$; P. 120. Gave morphia and atropia hypodermically for pain. Two large doses of castor oil and turpentine brought no action; then took calomel, soda, and ipecac powders for twelve hours, followed by Hunyadi water, but still no bowel movement. Enemata of turpentine, laudanum, castor oil, Epsom salts, and hot water were given in knee-chest position, which moved bowels freely, and relieved symptoms. Turpentine stupes also freely used. Dr. W. W. Keen confirmed diagnosis of appendicitis, and suggested pill. colocynth, comp. and opium.

In the other three cases, about the same symptoms presented, and the same treatment was successfully used. Dr. K. believes most cases of obstruction of the bowels, if not due to intussusception or strangulated hernia, are due to the absence of the natural secretion caused by localized typhlitis, which, if not soon relieved, becomes a perityphlitis, and then more or less general peritonitis must result.

Hence the rational method seems to be. 1. Relieve pain by hypodermic injections. 2. Remove cause or obstruction by causing, if necessary, pathological or excessive secretion, by giving some saline, which is the best antiphlogistic for the inflamed bowel. 3. Soften hardened fecal accumulation from below with enemata, solution of Epsom salts in water as hot as can be comfortably borne, to which add turpentine and oil. The knee-chest position, with copious enema, favors distension of the colon up to the seat of the disease. Enema, to be effective, must be given in this position, and it must remain in the bowel for some time, and in several cases it was necessary to repeat the operation three or four times. This plan of treatment has been successful in six cases, which are all that he has treated; but he fully realizes that it may fail in the seventh.

Treatment of Five Cases of Malarial Fever with Methylene Blue.

Dr. W. S. Thayer, of Baltimore, during the meeting of the Clinical Society of Maryland, said that Gulmann and Ehrlich described (*Berliner Klin. Wochensh.*, Sept., 1891,) the successful treatment of two cases of malarial fever with methylene blue. This treatment has since been tested in five cases entering the Johns Hopkins Hospital. One case of tertian ague yielded immediately to doses of 0.1 five times a day. No rise of temperature occurred after beginning of treatment. No organisms appeared in the blood after the third day. A severe case of quotidian ague had one chill twenty-six hours after the beginning of the treatment (0.1 every four hours), and there was less rise of temperature without chill on the two successive days. After this, the temperature was normal. No plasmodia were seen after ninth day. In a case of chronic malaria with pigmented crescents and small intra-cellular hyaline bodies in the blood, no organisms were seen after the ninth day under methylene blue four times a day. In two cases of severe chronic malarial remittent, the temperature fell to normal in a few days, but there was occasional returns of slight fever, and the organisms—hyaline bodies and pigmented crescents—had not entirely disappeared in forty-one and twenty-three days respectively. (In the former case, after eleven days treatment with quinine, a moderate number of organisms was still present.)

In all the cases the drug was given as a powder in capsules. Slight burning sensations, with micturition, were usually present after taking the drug, and were relieved by

small quantities (one-fifth of a teaspoonful) of powdered nutmeg several times a day. The urine, under treatment, was of a deep blue color. The fæces when passed were not colored, but on exposure to air, turned rapidly blue. The sweat and saliva were not colored.

The experience is sufficient to show that methylene blue has a definite curative influence on malarial fever, and to warrant its further trial.

Phenacetine-Bayer.

In these days, when influenza, in its protean forms, is likely to come suddenly upon us at any moment, it is well to remember the splendid services of this medicament in the condition cited. Combined with salol it holds the first place in the list of remedies for the dreaded "grippe," soothing the nervous condition, lowering the temperature, and dispersing the pain. Phenacetine-Bayer should be tried in all acute, febrile conditions. Its action is so prompt, safe, and effective, and the relief it determines is so well-marked and continuous, that it is daily growing in popularity with the practitioner. In all rheumatic or rheumatoid conditions, phenacetine-Bayer is also a most valuable remedy, while in neuralgias and migraine, it is, without doubt, our best analgesic.

Book Notices.

Wood's Medical and Surgical Monographs. Vol. 12, Nos. 1 and 2, October and November, 1891. Paper. 8vo. About 270 pages each. Single copy, \$1. One year, \$10. Wm. Wood & Co. Publishers, New York.

The monographs in the October issue are "treatment of diseases of women," by Thure Brandt; "modern treatment of the morphine habit," by Dr. A. Fromme; "a contribution to the study of so-called scarlatina puerperalis," by Prof. Dr. Denvers; "the influence of alcohol upon the organism of the child—a pharmacological—clinical study," by Prof. R. Demme; and "the diseases of development," by Dr. J. Comby.

The contents of this November issue are reprints of Dr. Geo. C. Kingsbury's famous volume, on "the Practice of Hypnotic Suggestion—being an elementary hand-book for the use of the Medical profession;" and Dr. Miquel's "practical manual of bacteriological analysis of water."

Transactions of the Ophthalmological Section of the American Medical Association, 1891. Cloth. 12mo. Pp. 380. (Dr. Leartus Connor, of Detroit, Mich., Chairman of Section; Dr. T. E. Murrell, of Little Rock, Ark., Secretary.)

We have before this expressed our hearty approval of the plan now adopted of reprinting the papers of each Section of the American Medical Association in book form. The adoption of the plan is solely due to the action taken by the Ophthalmological Section under the leadership of Dr. Connor. The reprint is from successive issues of the *Journal of the American Medical Journal*.

The Physician as a Business Man; or How to Obtain the Best Financial Results in the Practice of Medicine. By J. J. TAYLOR M. D. Cloth. 12mo. Pp. 144. Philadelphia. The Medical World. 1891. (From Publishers).

This is an interesting work, made up largely of extensive quotations from numerous authors, referring to the way doctors are treated, and to how they ought to be treated, etc. It contains some good advice, and some which ought to be condemned. For instance, the book advocates that "all Sunday work (except regular daily calls upon continued cases) should be charged as night work"—double fee. How can a person prevent being taken on Sunday? The whole tenor of the book is to change the doctor from a professional man into a tradesman; and if the directions given as the proper guide were followed, it could not be long before the high calling of the physician would be ignored, and he would be found a good deal "lower than the angels." Taken as a whole, the book ought to be rewritten before it is handed over to the young doctor to become his guide.

A B C of the Sweedish System of Educational Gymnastics. By HARTNIG NISSEN, Instructor of Physical Training in Public Schools of Boston, etc. With 77 Illustrations. Philadelphia and London. F. A. Davis, Publisher. Cloth. 12mo. Pp 107. Price, 75 cents.

This is a practical hand-book on the Sweedish system of physical culture, designed for school teachers and the private home. It gives plain answers to the most frequent questions, prescriptions of exercises for children of different ages, with full commands for each exercise, and the manner of their execution illustrated by wood cuts. It fills a want long felt for a good practical text-book, so that one may

learn all the essential movements required in physical culture.

International Clinics. *A Quarterly Review of Clinical Lectures on Medicine, Surgery, Gynecology, Pediatrics, Neurology, Dermatology, and Otology, by Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada.* Edited by JOHN M. KEATING, M. D., and J. P. CROZER GRIFFITH, M. D., of Philadelphia, and J. MITCHELL, M. D., F. R. C. P., and DAVID W. FINLAY, M. D., F. R. C. P., of London. October, 1891. Philadelphia. J. B. Lippincott Co., 1891. Cloth. 8vo. Pp. 373. (From Publishers).

The Clinical Lectures are well selected for the uses of practitioners, and the Lectures are chosen with special reference to their subjects. The subjects are selected from each of the several departments of practical medicine above named. It is impracticable to notice the special lectures, as simply the table of contents covers four pages in naming the subjects and authors of the forty-two lectures authoritatively reported. Each practitioner who can, should become a regular subscriber to these "International Clinics."

Ptomaines and Leucomaines and Bacterial Proteids; or, The Chemical Factors in the Causation of Disease. By VICTOR C. VAUGHAN, Ph. D., M. D., Professor of Physiological and Pathological Chemistry, and Associate Professor of Therapeutics and Materia Medica in University of Michigan, and FREDERICK G. NOVY, M. D., Instructor in Hygiene and Physiological Chemistry in University of Michigan. *New Edition.* 12mo. 389 pages. Cloth, \$2.25. Philadelphia: Lea Brothers & Co 1891.

To no authors is the world of practitioners more indebted than to those of this book for making so valuable the results of study in the bacteriological laboratory. Chemistry, heretofore considered useful to the doctor mostly in the line of advice as to incompatibilities, antidotes, urinary analyses, and a few other such things, now comes to the front, and is hereafter to be as closely studied and applied in medical practice as any other of the so called elementary branches of medical education. It is to be the *physician's* assistant in leading him to a correct understanding of the pathology of diseases. For instance, the causation of diphtheria in the individual becomes understood under the doctrine or demonstration of the ptomainic development from the lodgment of the Loëfler bacillus. This germ, although found only at the seat of inoculation, causes marked systemic disturbances because of its soluble products entering the circulation.

Efforts are now being made to secure immunity from disease and even to effect cures by the employment of the bacterial products. Most emphatically would we urge every practitioner to read this book attentively, in order that he may learn much more than he now knows.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text book Specially Adapted for Students of Pharmacy and Medicine. By WM. SIMON, Ph. D., M. D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons, Baltimore, and Professor of Chemistry in the Maryland College of Pharmacy. New (third) Edition. 8vo. 477 pages, with 44 Wood Cuts and 7 Colored Plates, illustrating 56 of the most important Chemical Tests. Cloth, \$3.25. Philadelphia: Lea Brothers & Co. 1891.

While possessing all the usual qualities of an excellent text-book for the student or laboratory, this "Manual" presents the unique advantage of furnishing plates showing the variously shaded colors of certain chemicals, etc., and their re-actions. These color re-action tests are made for iron, zinc, manganese, chromium, copper, lead, bismuth, mercury, silver, arsenic, antimony, tin, the alkaloids, urine, etc. The chapter on Urinalysis is excellent. This "Chemistry" is especially valuable to medical students and practitioners, as devoting so much of detail to descriptions of analyses, tests, etc., of those things with which the doctor has mostly to deal.

A Practical Treatise on the Diseases of Women. By T. GAILLARD THOMAS, M. D., LL. D., Emeritus Professor of Diseases of Women in the College of Physicians and Surgeons, N. Y., and PAUL F. MUNDÉ, M. D., Professor of Gynæcology in the New York Polyclinic. New (sixth) Edition. Thoroughly Revised and Rewritten by Dr. Mundé. Octavo. 824 pages, with 547 illustrations. Cloth, \$5.00; Leather, \$6.00. Philadelphia: Lea Brothers & Co., Publishers. 1891.

The want of a new edition of "Thomas' Diseases of Women" has been long felt. The author, finding it impracticable to give the necessary time to the revision, secured the services of Dr. Mundé, with authority to note any differences in opinion or practice under his own signature. The revision has been very thorough, without the loss of any of the teachings of the great leader, but with the addition of much new matter, bringing the work fully up to date. Many new photographically reproduced illustrations have

been inserted, and on every page is seen the handwriting of a reviser scarcely second in authoritative statement to the original author himself. In its new form, this book will surely maintain its position as an authority and instruction book for the practitioner. The Publishers have done their part well.

Syllabus of the Obstetrical Lectures in the Medical Department of the University of Pennsylvania. By RICHARD C. NORRIS, A. M., M. D., Demonstrator of Obstetrics, University of Pennsylvania, etc. *Second Edition.* Philadelphia: W. B. Saunders, 1891. Cloth. Demi 8vo. Pp. 198. Price, \$2.

Every college student of obstetrics needs such a book as this to aid him in closely following his lecturer. Every page of text has a facing blank leaf, on which notes or memoranda are to be taken by the student. The book is systematically arranged as to subjects—from the anatomy and physiology of the parts concerned to the details of after-treatment of mother and child, as usually taught in colleges of high standing. The author has done his part well—limiting his task principally to a syllabus of the lectures as delivered by Prof. Hirst. An improvement in this edition is the addition of a good index.

Age of the Domestic Animals. *Being a Complete Treatise on Dentition of the Horse, Ox, Sheep, Hog, and Dog, and on the Various Other Means of Determining the Age of these Animals.* By RUSH SHIPPEN HUIDEKOPER, M. D., Late Dean of Veterinary Department, University of Pennsylvania; Professor of Sanitary Medicine and Veterinary Jurisprudence, American Veterinary College, New York, etc. Illustrated with 205 Engravings. Philadelphia and London: F. A. Davis, Publisher. 1891. Cloth. 12mo. Pp. 217. Price, \$1.75.

This book is important to every veterinarian and owner of horse or cattle. The title above quoted is descriptive enough of the scope and details of the work to show its great value to laymen as well as to the profession. It embraces all that has been written on the subject, and includes the author's own deductions from a careful study, based on personal observation. Whoever deals in horses, cattle, etc., should study this book for themselves; and then they can tell how old the animal is that they are buying without trusting to the oftentimes deceptive statements of the horse-trader, etc. There is no other one book in which we can find so much of value in this special direction.

Manual of Practical Obstetrics. By EDWARD P. DAVIS, A. M., M. D., Clinical Lecturer on Obstetrics, in Jefferson Medical College; Professor of Obstetrics and Diseases of Children, in Philadelphia Polyclinic, etc. *With 140 Illustrations.* Two of which are Colored. Philadelphia: P. Blakiston, Son & Co. 1891. Demi 8vo. Pp. 298. Cloth. \$2.

This is a practitioner's text or advice book. It presents all the important practical points in the obstetric art, without the unnecessary volume of anatomy and physiology attached—with both of which the obstetrician is presumed to be familiar. The descriptions are perfect, the illustrations true to nature, the operations or manipulations well advised, and the necessary prescriptions for the lying-in woman—during labor and afterwards—are very good. We do not know of a "manual" of obstetrics that is so useful to the practitioner for advice in the hour of labor as this one.

"Davis' *Manual*" will soon become as familiar to the profession as are the works of Parvin, Lusk, Playfair, etc.

Practical Treatise on the Diseases of the Ear, including a Sketch of Aural Anatomy and Physiology. By D. B. ST. JOHN ROOSA, M. D., LL. D., Professor of Diseases of the Eyes and Ears in New York Post Graduate Medical School, and President of the Faculty, etc. *Seventh Revised Edition.* New York: Wm. Wood & Co. 1891. Cloth. 8vo. Pp. 741.

This magnificent work is entitled to the credit of being a practical exhaustive treatise on most of the known facts related to the practice of otology, while it is also full of personal observations and suggestions, based on years of special study. The library of the specialist cannot be without the book, and the general practitioner who reads it carefully will find in it enough to make him adopt it as his special work for consultation and advice concerning diseases of the ear. As compared with the sixth edition, this seventh has the benefit of such corrections or changes as seemed required by progress in otology. Among the additions will be found a fuller discussion of the relation of diseases of the naso-pharynx to ear troubles," the value of operations upon the drum-head and ossicles, as well as in the history and practice of operations upon the mastoid. Points of anatomy, descriptions of disease, procedures in operation, etc., are illustrated by 140 well-executed wood cuts; and a full page of eight chromo-lithographic figures is added to show the exact appearance of seven diseased conditions—figure 1 illustrating the normal membrana tympani. The questions related to deaf-mutism are also fully discussed.

Comparative Anatomy of the Domesticated Animals. By A. CHAUVEAU, M. D., LL. D., Professor at the Museum of Natural History, Paris, etc. *Revised and Enlarged with the Co-operation of S. ARLING,* Director of the Lyons Veterinary School, etc. With 585 Illustrations. New York: D. Appleton & Co. 1891. Large 8vo. Pp. 1084. Cloth. Price, \$7. (For sale by West, Johnston & Co., Richmond.)

This great work has been thoroughly revised by the Translator from the French, George Fleming, C. B., LL. D., F. R. C. V. S., Late Principal Veterinary Surgeon of the British Army, etc., so as to make this *Second English Edition* even a better work than the original. It will unquestionably continue in the United States as the standard text-book and work for reference on the subject. The anatomy of the ass, mule, rabbit, and camel, has been added in this edition. The horse is the special animal whose anatomy is described in detail in this text-book, while all the differences noted in the anatomy of other animals are carefully described. A copious index is added to the book—a thing not in the French edition. This Anatomy is indispensable to any one who undertakes the study of Comparative Anatomy of Animals. The book is finely issued by the popular Publishers.

System of Practical Therapeutics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica, in Jefferson Medical College; Assisted by WALTER CHRYSTIE, M. D., Instructor in Physical Diagnosis in University of Pennsylvania. Vol. I. With Illustrations. Philadelphia: Lea Brothers & Co. 1891. 8vo. P. 1052. Leather,

This is the first volume of a system of practical therapeutics, in which all the resources and methods of the clinician and laboratory worker are attempted to be portrayed. Surgical therapeutics is introduced in the discussion of those ailments where such interference is indispensable, although the major operations have not been considered except in a very few instances. Succeeding volumes will follow as rapidly as the Editors can possibly arrange. The present Volume I is taken up with "General Therapeutic Considerations—Prescription Writing—Remedial Measures other than Drugs—Preventive Medicine—Diathetic Diseases and Diseases of Nutrition." Seventeen different authors—each prominent in his specialty—have contributed papers to this volume, of whom 2 are from London; 1 from Canada; 1 from California; 1 from Maryland; 1 from Washington, D. C.; 1 from Michigan; 2 from New York; 8 from Philadelphia; and none from the South.

Editorial.

American Medical Temperance Association.

This Association was organized at Washington, May 7th, 1891, in pursuance to call by Dr. N. S. Davis, of Chicago, Ill. Sixty-one physicians were enrolled as members. Dr. Davis states that "The object of this Association is to advance the practice of total abstinence in and through the medical profession, and to promote investigation as to the action of alcohol in health and disease, and it aims at being a bond of union among medical abstainers scattered all over our country. It admits as members regular medical practitioners who are practical abstainers from all alcoholic liquors as beverages. Members are not required to sign any pledge, but if such, for any reason, cease to become total abstainers, it is expected that they will withdraw from the Association. The liberty of members to prescribe alcohol is entirely uncontrolled."

It will be apparent that the central purpose of this Society is to study and investigate the action of alcohol as both a beverage and medicine. A similar Association, composed of members of the British Medical Society, has been in existence many years. In this country, the Association for the Study and Cure of Inebriety has been in existence for twenty years—composed largely of specialists and persons engaged in treating inebriety as a disease. While it has done grand work, and built up a very suggestive literature through its *Journal of Inebriety*, it has not taken up the popular medical discussion of alcohol, which this new Society proposes to do. These two Societies will be closely allied in both work and purpose. One will have for its object the grouping and harmonizing the diverse theories of physicians concerning alcohol and its action, and the other the study of the inebriate and his maladies.

Medical men are called upon to determine the facts concerning alcohol, and the necessity for medical study and agreement concerning the general truths are apparent to every one. For this purpose, the Medical Temperance Association invite the co-operation and aid of every physician, not for the propagation of any theory, but for the gathering and grouping of facts concerning the action of alcohol. It is entirely independent of any other object except the purely scientific question of alcohol.

The regular Annual Meeting will be held at the same place and time of the American Medical Association. Papers and discussions will be presented at this time.

This Association appeals to every physician, not as prop-

agandists, but as scientists, for facts and clinical experience. It appeals to him to guide and direct public sentiment, and to make this Association the great central power for the study and propagation of the facts and laws relating to alcohol, and its use and abuse.

The following are the Officers elected for the first year: Dr. N. S. Davis, *President*, Chicago, Ill.; Drs I. N. Quimby, Jersey City, N. J.; J. B. Whiting, Janesville, Wis.; F. E. Yoakum, Shreveport, La.; J. Taft, Cincinnati, Ohio, *Vice-Presidents*; Dr. T. D. Crothers, Hartford, Conn., *Secretary*; Dr. G. W. Webster, Chicago, Ill., *Treasurer*.

For by-laws and constitution, and application for membership, address the Secretary, at Hartford, Conn.

The W. D. Allison Co., of Indianapolis, Ind.,

Formerly Roberts & Allison, have been delayed somewhat in filling orders because of the recent fire in their factory. But the company is again in full working order, and prepared to do even better work than heretofore. Their operating and surgical and gynæcological chairs and tables are becoming rapidly known and adopted by practitioners, and every one who uses them is delighted with the purchase. The firm is one of the most reliable in the country in the faithful observance of their contracts; and where the purchasers themselves are reliable, this firm will be found as accommodating in every particular as it is practicable for a business house safely to be. Their invalid, reclining, and parlor chairs, are also models of perfection.

Mississippi Valley Medical Association.

During the Seventeenth Annual Session at St. Louis, October 14th, 15th, and 16th, 1891, Dr. C. A. L. Reed, of Cincinnati, was elected President; Dr. E. S. McKee, of Cincinnati, Secretary; Drs. C. S. Bond, of Richmond, Ind., and J. H. Stucky, of Louisville, Vice-Presidents; Dr. Joseph Ransohoff, of Cincinnati, Chairman Committee of Arrangements. Place of meeting, Cincinnati, October, 1892.

Errata.

In the article by Dr. H. P. Wenzel: Page 651, line 11 from top of page, read, "and *are not easily retained*;" not, "are retained." Page 652, line 22 from top of page, read, "succulent;" not "sacculent." Page 652, line 32 from top of page, read, "deep—cicatrized;" not "deep cicatrized." Page 652, line 31 from top of page, read, "two (2) severe;" —not "too severe."

Drs. Holmes and Davis' Private Sanitarium for Diseases of Women.

We had intended making special mention of the Private Sanitarium of Dr. J. B. S. Holmes, at Rome, Ga., who deserves great credit for the establishment of the long-felt want in the South of a Sanitarium, complete in all its appointments for the medical and surgical treatment of diseases of women, including a maternity department. He has now added to the value of his Sanitarium by taking into partnership that most able of Southern gynæcological surgeons, Dr. W. E. B. Davis, lately of Birmingham, Ala., the founder and Secretary of the Southern Surgical and Gynæcological Association, etc. With such a medical and surgical staff, composed of men so gifted in their professional ability, popular and progressive, this Sanitarium will soon become famous throughout the country. We bespeak for them the patronage and good influences of doctors with patients they may have to refer to such an institution. See their page advertisement, descriptive of the place, buildings, advantages, etc.

The Winyah Sanitarium for Diseases of the Lungs and Throat,

At Asheville, N. C., under the direction of Dr. Karl von Ruck, has gained national fame, and the scientific contributions made by the doctor, with special reference to the classes of diseases coming under his care, have added greatly to the advance of learning regarding consumption, etc. The benefits of the peculiar climate about Asheville, and the advantages to the patient with chronic lung and throat diseases arising from the aseptic hospital plan of treatment of such diseases could not be more emphasized than a study of the wonderful results at his Sanitarium. If we could insist by convincing and persuading statement that it is in the early stage of consumption—as far as practicable, in the pre-tubercular stage—that recoveries are easiest effected by such treatment, then the conscientious doctor would send his patients at that period, and have them returned in health rather than wait until the disease has consumed all vital forces and have their patients returned in undertakers' caskets. Put consumptive patients under special treatment early. Results at Winyah Sanitarium fully justify this advice. In the *early* stage of consumption send patients to the Sanitarium.

Dr. Robert T. Wilson, of Baltimore,

Has been appointed Visiting Physician to the "Home for Incurables," of that city.

Dr. W. E. B. Davis, late of Birmingham, Ala.,

Moved to Rome, Ga., January 1st, 1892, to become a partner of Dr. J. B. S. Holmes (under the style of Drs. Holmes & Davis) in the medical and surgical treatment of diseases of women at the Sanitarium formerly conducted by Dr. Holmes. Dr. Davis is known as one of the foremost surgeons and gynæcologists of this country. The esteem in which he is held by the profession is indicated measurably by the fact that at this time he is President of the Tri-State Medical Association, Vice-President of the American Medical Association, founder and Secretary of the Southern Surgical and Gynæcological Association, etc.

Messrs. Bartlett, Garvens & Co.,

Have opened a large Surgical Instrument House, etc., in Richmond, Va. They carry a very large supply of instruments, appliances, batteries, doctors' operating chairs and tables, thermometers, articles of all kinds useful for the sick or wounded—all by the leading manufacturers of this country. They also repair instruments, execute surgeons' and special wants, sharpen instruments, physicians' orders as to apply trusses, etc. Indeed this firm fills a long-felt want of the profession and of patients in this city. Of course they carry in stock all sorts of "odds and ends" of things that might be needed in cases of injury or sickness. We trust the profession will encourage them to abide with us by giving them patronage. Expert workmen from the best of the instrument houses of the country are with them. See their advertisement.

Book Announcements.

J. B. Flint & Co., New York, have in press, and ready early in the current year, the following books: (1) A complete system of *Gynæcology and Obstetrics*, with 869 new illustrations, based upon translations from the French of Pozzi, Auvard, and others, revised by Chas. Jewett, M. D., bound in leather or half morocco, \$8. Flint's Condensed Complete *Encyclopædia of Medicine and Surgery*. Arranged upon a new system, and embodying the various methods of treatment employed by eminent practitioners. The most valuable and complete work of this nature ever published. The result of a year's labor of a large corps of writers. Leather or half morocco, two volumes, \$8 per volume. The above works sold by subscription. Also ready, March 1st, the *Electro-Therapeutics of Gynæcology*, by Augustin H. Goellet, M. D. Cloth bound, \$2.50.

Medical and Surgical Society of the District of Columbia.

The officers-elect for 1892 are Dr. Lewis K. Beatty, President; Dr. Richard S. Hill, Vice-President; Dr. Llewellyn Eliot, Secretary and Treasurer; Drs. John F. Moran, Llewellyn Eliot, J. Wesley Boveé, W. P. C. Hazen, and John V. Carraher, Executive Committee. Meetings on second Monday of each month. A member who fails to present a paper at the time appointed for him has to pay \$5; and if a member refuses to pay this fine, he "*shall* be dropped" from the membership.

We appreciate most highly the honor bestowed upon the Editor of this journal by this Society in electing him an Honorary Member—especially when the total honorary members cannot exceed ten in number, and as the only other Honorary Member as yet is Dr. John B. Hamilton.

The Doctor's Weekly,

To be begun January 1st, 1892, is announced. Dr. Ferdinand King, 33-39 Gold St., who has terminated his connection with the *International Journal of Surgery*, will be Editor and Proprietor of the *Weekly*. He is experienced as an editor, pushing as a manager, and we hope him great success in his "new departure"

Dr. Irving C. Rosse, of Washington., D. C.,

Has a very complimentary letter from Sir Morell Mackenzie with reference to his contributions on "Physical Training," etc. Dr. Rosse's publications relating to athletics considerably antedate those of the eminent London doctor; so that this flattering acknowledgment is very pleasant to the friends of Dr. Rosse.

Lying-in Department of the New York Post-Graduate Medical School.

Mrs. C. P. Huntington has given the Directors of the Post-Graduate Medical School \$2,000, a sum sufficient to defray the expenses of the Lying-in Department for one year. Professor von Ramdohr will have charge of this department, at 543 East Thirteenth street, where instruction in Obstetrics will be given to graduates in medicine only.

Dr. Thomas W. Simmons

Has moved from Union Hall to Martinsville, Henry county, Va., where he will continue the practice of medicine.

Richmond Medical and Surgical Society.

Dr. Thomas J. Moore is the President-elect for the year 1892; Dr. Rives Tatum, Secretary; Dr. J. N. Ellis, Reporter. It is the purpose of the new officers to arouse a new interest in medical and surgical papers, reports, etc.

Obituary Record.

Dr. Henry Fraser Campbell,

Whose fame in medicine is world-wide, died December 15, 1891, at his home in Augusta, Ga., after a lingering illness. He was born in Savannah, Ga., February 10th, 1824. He began the study of medicine when 15 years of age, and received his diploma as Doctor of Medicine in March, 1842, from the Medical College of Georgia—now the Medical Department of the University of Georgia. He at once established himself in practice in Augusta until 1862, when he removed to Richmond, Va., where he resided during the War, and where he had charge of the Georgia Military Hospitals, and was one of the Army Medical Examining Board of the Confederate States. He was Professor of Anatomy in the Medical College of Georgia from 1853 to 1867 (with the exception of the period of the War). He was Professor of Surgery in the New Orleans School of Medicine—1867–8, after which he returned to Augusta to accept the professorship of Operative Surgery and Gynæcology, created so as to secure him. In 1881, he was elected to the chair of Principles and Practice of Surgery, which position he practically held up to the time of his fatal illness. To Dr. Campbell is due the credit of discovery (in 1850) of the excito-secretory system of nerves. As a gynæcologist and surgeon, his contributions have likewise been famous. So that it is not surprising that from every quarter of the medical world praises and honors were showered upon him. About two years ago he suffered from cataract, but under the care of the eminent ophthalmic surgeon of Baltimore, Dr. J. J. Chisolm, he soon recovered thoroughly from the operations successfully performed. As a friend, he was true; as a man and physician, exemplary; and as a Christian, his good works will long follow him. He was for years an earnest Christian worker in the Presbyterian Church, The *Augusta Chronicle*, of Wednesday, December 16th, 1891, devotes several columns to a record of his life.

VIRGINIA MEDICAL MONTHLY.

VOLUME XVIII—No. 11. WHOLE NUMBER, 215.

RICHMOND, FEBRUARY, 1892.

Original Communications.

ART. I.—Phelps' Operation for Talipes Varo-Equinus *

By A. M. PHELPS, M. D., of New York, N. Y.,

PROFESSOR OF ORTHOPÆDIC SURGERY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, AND IN THE UNIVERSITY OF THE CITY OF NEW YORK; PROFESSOR OF SURGERY IN UNIVERSITY OF VERMONT; SURGEON TO CHARITY HOSPITAL, NEW YORK, ETC.

Gentlemen,—The two cases of club-foot which are before you, and upon which we will proceed to operate, are of the severest form of this deformity. One patient is six years of age, and the other fourteen. Both are suffering from congenital talipes varo-equinus.

You will observe that the feet are much shortened on the inner side. The difference between the length of the inner and outer side of the feet is nearly an inch and a half. To remedy this condition, the soft parts on the shortened side of the feet must be lengthened, or the feet upon the outer side must be shortened by removing the bone.

A method will be followed in these cases, which I have

* Amplification of remarks made during the demonstration of the operation before the Medical Society of Virginia, at Lynchburg, Va., October 7th, 1891.

long practised and taught, presented at the Tenth International Congress in Berlin, in 1890, which is as follows:

Cut the contracted parts as they first offer resistance, cutting in the order of those parts which first contracted when the deformity was produced, beginning with the tendo-Achillis. Strong force will be applied after the division of each tissue; and if the skin is found to be short, as it certainly is in these two cases, it will be divided, and the wound allowed to gape.

If the skin is not short in a given case, sub-cutaneous tenotomy will usually be found sufficient. *If the skin is short, it should certainly be divided, or the foot cannot possibly be placed in a super-corrected position.*

Subcutaneously, divide, first, the tendo-Achillis. Great force is used, and the heel drawn down as nearly to the normal position as possible. The skin being upon the stretch, an open incision is made, beginning in front of the inner malleolus and carried transversely one-third the distance across the sole of the foot—carried down to the inner side of the astragalus. (See Fig. 1.)

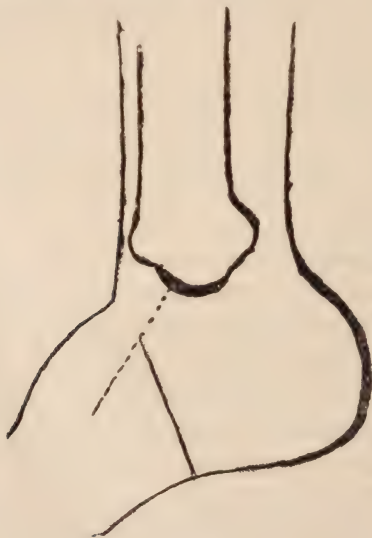


FIG. 1.—(Phillipson.)

Through this incision, the following tissues can be cut, if they offer strong resistance, in the order given:

- 1st. Tenotomy of tibialis posticus.
- 2nd. Division of abductor pollicis.
- 3rd. Division of plantar fascia through the wound.
- 4th. Division of flexor brevis muscle.
- 5th. Division of long flexors.
- 6th. Division of deltoid ligament, and all its branches, if necessary. (See Fig. 2.)



FIG. 2.—Incision under the skin for the ligament.—(Phillipson.)

- 7th. Linear osteotomy through the neck of the astragalus. (See Fig. 3.)

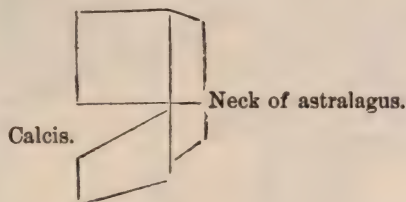


FIG. 3.

8th. Resection of a wedge-shaped piece of bone from the body of the os calcis, the point meeting the linear osteotomy through the neck of the astragalus. The foot will now usually swing to a straight position.

In the management of club-foot, it often becomes necessary for the operator to apply more force than can be done by the hands, not only during the time of the operation, but in the subsequent treatment of the foot as well.

In nearly all cases of varo-equinus, there is a shortened condition of the ligaments posterior to the ankle-joint, and also an inward rotation of the os calcis. In such cases, there is not sufficient power in the hand of the operator to overcome the ligamentous contraction.

To fulfill all these requirements, I have devised a machine which will be found invaluable. It can be used in the class of cases above indicated, and also for the purpose of placing the foot in the proper position before the application of the water-glass shoe and plaster-of-Paris dressing, or the application of any form of apparatus.

It consists of a combination of levers and screws so adjusted as to apply the force in the proper direction, varying from a single pound to one ton in force. The bed-piece (Fig. 4) is fastened to a table by means of a clamp, 15; 14



FIG. 4.

is an adjustable slide working upon the cross part of the bed-piece. After having etherized the patient, he is placed in the machine with his legs flexed, as seen in Fig. 4.

The slide, 14, is adjusted to prevent the leg from slipping.

The straps, 10, 11, and 12, hold the leg in a firm position on the bed-piece; 16 is a fulcrum, into which the end of the lever, 1, is inserted for the purpose of making the pressure upon the os calcis by means of the pad; 4, 5 is the adjustable fulcrum into which the end of the other lever is inserted. The foot is attached to this lever by means of straps 7, 8, and 9, Fig. 4, and 5, 6, 7, Fig. 5. The straps, 5 and 6, are attached to the nuts, 4, 4, by turning the screws 2, 2, which are held in the proper position by the framework, 3.

Any amount of force can be applied to the heel and instep. The jack can be adjusted to the lever, as seen in Fig. 4; the strap, 7, passing around the foot, as seen in Fig. 5,

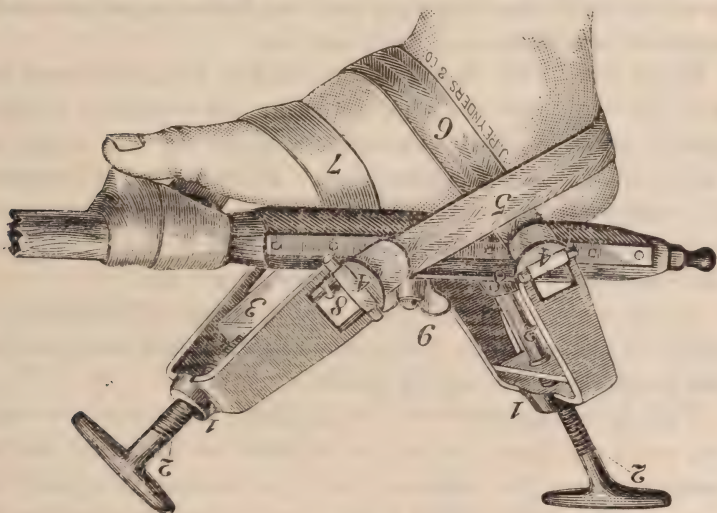


FIG. 5.

secures the toes firmly. The operator and his assistant turn up the screws, applying any amount of force required. The operator now, with his canting lever, 3, in his hand, flexes and rotates the foot, breaking it across the adjustable fulcrum, 6, while his assistant holds the heel firmly with the other lever. As flexing force is applied by the large lever, the leg is prevented from slipping by the adjustable slide, 14.

The machine will not only be found useful in all cases

of club-foot, but more particularly so in those severe forms of club-foot requiring operation. The operator, from time to time, can adjust the machine and apply any amount of force—breaking a ligament which he would find difficult or impossible to cut. In the after-treatment of club-foot it will be found most useful.

You will observe that in these cases our operation was completed when the open incision was made, osteotomy not being necessary. With great force I have pulled these feet to a super-corrected position. If, at this stage, the feet could not be drawn to that position, I would perform osteotomy, or even remove the cuboid and scaphoid bones. *The operator should never cease operating until the feet are super-corrected; otherwise a relapse may be looked for.*

Begin first with manipulation, either with the hand or with the club-foot machine, or both, and conclude, if necessary, with extensive osteotomy, pursuing the order of procedure already recommended. Failures occur because the operator concludes his work before the foot is straight, and guesses that he can correct the deformity left by proper after-treatment, which, as a rule, he cannot do.

Another source of failure is bad dressing. The desire to use some pet splint or devise some new scheme accounts for the disappointment which results.

Failing to super-correct by operation, some use a worthless wood or metal splint, so adjusted as to make undue pressure upon the resisting foot—producing sloughing or even gangrene. When the foot has been once super-corrected, it will then rest in proper dressings without resistance or pressure, and sloughing is never seen.

The Operation.—Prepare the foot by scrubbing, scraping, and antiseptizing with bichloride of mercury solution, 1 to 1,000 the night before. Carefully see that every detail of antiseptic surgery is followed at the time of operating. Then cleanse the foot with iodoform, 1 part; ether sulph., 8 parts. Apply the Esmarch bandage,

Keep up a constant irrigation with bichloride solution, 1

to 2,000 during the operation. After strong manipulation, either manual or instrumental, and subcutaneous tenotomy, make the open incision already described in Fig. 2, and cut in the order already suggested. Use strong force after each tissue is cut. Nothing will be gained by dividing soft parts more extensively than suggested above. If the foot still resists, and cannot be placed in a super-corrected position, linear osteotomy, and, finally, cuneiform resection should be done (see Fig. 3). In two cases, in adults, I found it necessary to remove both cuboid and scaphoid bones. Open incision in children under one year of age I have seldom found necessary.

The Dressings.—Sponge out the wound; then apply, 1, Lister's protective, not rubber tissue; 2, Antiseptic gauze—large quantity; 3, Antiseptic bandage; 4, Absorbent cotton to knee; 5, Over all, a plaster-of-Paris bandage, holding the foot in the super-corrected position until the plaster sets; avoid making pressure either by dressing or twisting the foot too far outward; 6, Remove the Esmarch bandage; 7, Sling the foot to a nearly perpendicular position for six hours or longer. Organization of blood-clot usually occurs, but it is not essential to a good result.

My last cases were dressed as indicated, but the wound was filled with chopped-up-fine catgut. Organization was perfect in each case. Figs. 6 and 7, show scarring in feet four weeks after the operation.



Fig. 6.



Fig. 7 — (Gerster.)



Fig. 8.



Fig. 9.

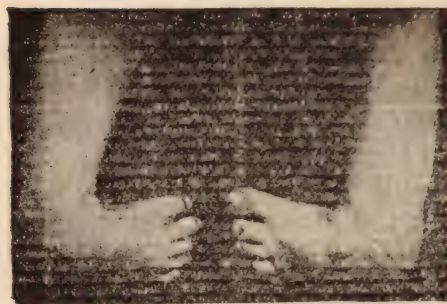


Fig. 10.

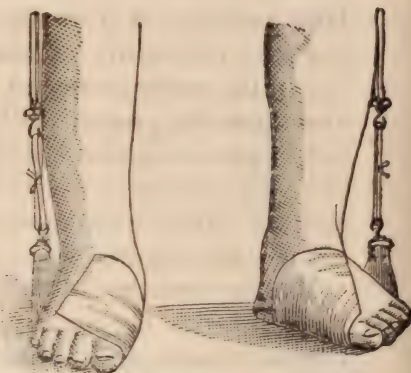


Fig. 11.

Figs. 8 and 9, the condition before and three weeks after the operation. Figs 10 and 11, the deformity and method of after-treatment by means of hooks and plasters one year after.

After-treatment.—The plaster of Paris shoe; water-glass shoe and the hooks and plasters answer well; the hooks and plasters are well adapted to children over two years of age. Fig. 11 represents the plaster and hooks as applied to the feet, the bandages removed. The upper hook connects with a belt above the hips by means of a tape, which tape is secured to the side of the leg at the knee

with a strap. The lacings between the hooks hold the foot in the normal position.

In conclusion, equino-varus, after any operation, or mechanical treatment, is quite likely to relapse. For months, or even years, the surgeon will need to look carefully after many of his patients. I have seen relapses following mechanical treatment which have been carried out for years in every form of osteotomy, and more particularly excision of the astragalus. (See Fig. 12). In my travels through



Fig. 12.—Shows not an uncommon result following primary osteotomy. There has been a resection of the astragalus in one foot and cuneiform tarsectomy in the other. Photograph made of a case in the practice of an eminent European surgeon.

Germany, I made casts of feet which had relapsed after these osteotomies, in the hands of some of the most eminent and distinguished German surgeons, and the same observations are to be made in every country. An operation only straightens the feet; when this has been accomplished, the treatment (and not until then can treatment be said to begin) is only commenced. The slight twist in the neck of the astragalus will not be found a serious obstacle in the way of cure, unless excessive, in which class of cases it

should have been divided with a chisel at the time of operating.

What are the limits of the application of this operation?

1. Eliminate all cases which by the hand can easily be placed in a normal position. 2. Eliminate all of those cases which can, by sub-cutaneous tenotomy, be perfectly relieved with accompanying proper after-management. Then open incision will find its legitimate place in surgery.

What are the advantages of the operation? 1. Cutting parts as they offer resistance in their respective order, prevents the operator from needlessly cutting tissue not deformed by contraction. 2. After the subcutaneous tenotomy of the tendo-Achillis, the tibialis posticus tendon is easily cut through an open wound near its attachment to the scaphoid; ligamentous contraction at this point can also be divided. 3. Through this open wound, contracted parts can be extensively cut without wounding the plantar arteries or nerves. 4. After all contracted soft parts have been divided, including the skin (which, by the way in this class of cases is always short, and from its intimate connection with the plantar fascia, would defeat the object of the operation), the operator can ascertain the amount of the deformity of the bones, and if any considerable amount exists, it can be easily remedied with a chisel. 5. It restores the foot to its natural length by lengthening the shortened side. 6. It makes the surgeon master of the situation; he advances step by step in a proper order, and need not stop or retreat until the deformity is overcome, beginning with manipulation and subcutaneous tenotomy, and ending with osteotomy, if necessary.

I desire to say that osteotomy should never be resorted to as a primary operation, and not until after the contracted soft parts have been lengthened, for the reason that in primary osteotomy the bones of the foot must be shortened in proportion to the amount of shortening of the soft parts; there is a mortality of 5 per cent; and in the vast majority of cases of this form of intractable club-foot, it will be found un-

necessary after the steps which I have detailed have been taken. And certainly no operator can determine the amount of deformity in the bones until he has relieved all the contracted soft parts, and a slight deformity in the bones would better be left than resort to an extensive osteotomy.

To summarize my results up to the time of my reports made at the International Congress, I find that in 93 cases there were 161 operations performed, the average age being six and a half years; the average time of healing of the primary wound was four weeks; there were 117 cases of blood-clot organization; 4 catgut, and 19 failures in 140 cases.

The duration of after-treatment was ten months. On the fourth month after operating, the feet were all straight. Out of the 140 cases traced after one year, 10 cases were found relapsed, or partially so from neglect. I will say that relapses, when they occur, take place during the first year after the operation as a general rule.

There were performed 10 linear osteotomies, 5 linear osteotomies with cuneiform resection from os calcis or cuboid, and 2 linear or cuneiform osteotomies, together with removal of both cuboid and scaphoid bones, making in all 17 osteotomies.

These results vary but little from Dr. Kaptyn's, of Abcande, Amsterdam, who has kindly furnished me with the statistics of 42 operations in 36 cases in Holland. In this series 34 were very good; 1 materially improved; fair results in 6; and 1 still under treatment. In other words, good results were obtained in 36 feet, with useful feet in all the others, except one, which is unknown.

I find in looking over the literature on the subject, the following reported cases: Hoffe, 6; Schede, 20; Nunchen, 13; Oliva, 6; Postempski, 1; Schreiber, 11; Lowenstein, 2; Jones, 10; Roman, 3; Giordane, 1; Motta, 7; Volkman, 21; Kirmison and Rochard, 7; Ambrose, 1; Phillipson, 3; Levy, 9; Kaptyn, 42; Post, 2; Hamburg Medical, 1884, 12; Hingston, 4; the writer, 161; making in all 342. (This in-

cludes the cases of Professor Tilanus, Professor Korteweg, Dr. Konwer, Professor Sterson, Van der Hoeren, Dr. Dunnewold.

All the cases at the time of reporting upon them were good results.

In no case did I find a sensitive scar, a flat foot, or paralysis following the operation; neither was there a single death. No considerable atrophy of the muscles of the limb followed the operation in any case; the motion of the toes was preserved in nearly all the cases. In those with loss of flexion of toes, locomotion seemed to be as perfect.

In my series, one hundred and forty-one cases had already run the gauntlet of tenotomy and instrumental treatment, with a relapse in each case.

[In notes received by Dr. Phelps from Drs. R. O. Owen and C. E. Busey, of Lynchburg, Va., just prior to going to press with this article, they report first-rate results in the two cases operated on before the Medical Society of Virginia, October 7th, 1891, and that the feet are perfectly straight referred to in this article.—ED.]

ART. II.—Typhoid Fever—Its Treatment by the Use of Water by the Mouth and Rectum

By G. G. ROY, M. D., of Atlanta, Ga.

PROFESSOR MATERIA MEDICA AND THERAPEUTICS SOUTHERN MEDICAL COLLEGE.

It appears to me that typhoid fever is, in the Southern climate, a much more formidable disease, and less amenable to treatment than it was twenty-five years ago. Of some of the causes of this, I have my opinion; but, as it is merely an opinion, which might not throw much light on the subject, I shall not consume time now in giving it. Nor is it my purpose to discuss the etiology or pathology of the disease. Learned contributions have been, and are every day being made as to these; but we do not see that they lessen the mortality, which must eventually be found at the door of hygiene.

In the three years of my professional life before entering the army of the Confederate States, I saw in the practice of my father, Dr. A. G. D. Roy, and other physicians, more typhoid fever, and apparently of a much graver character, than I have seen in the same space of time since. The disease then, though apparently more aggravated than many fatal cases we see at this day, yielded more rapidly to treatment than now. Why is this? Was the old-fashioned treatment better, or is the human race more vulnerable or susceptible to the poison now than then? Or is the poison more virulent, or the constitutions of the present generation less able to resist its onslaught by reason of degeneracy?

I contend that the old treatment of early blistering upon the first evidence of tenderness of the abdomen, spirits of turpentine for the inflamed, agminated, and solitary intestinal glands, sweet spirits of nitre with citrate of potassium *daily*, to keep up the kidneys action, with nourishment, generally in the form of beef or chicken essence, or milk, every two hours, gave better results *then*, than we get from the use of the cold tar preparations, or aconite, or whiskey, with nourishment at this day.

Would not the old treatment do as well now as then? I cannot say; for I do not use it. Blistering is held as a barbarous relic of the past. Turpentine is nauseous, and, for this reason, unfashionable; and medicines, unless given in the dantiest form, will be rejected by your patient as a relic of old fogyism. Therapeutics is getting to be very æsthetical now anyway, and I sometimes think that patients would rather die under fashionable treatment, than be cured by the old methods. While you are in Rome you must do as the Romans, and as there is no help for it, we can only let them take their choice.

But I have digressed from the object of this paper. It is to speak of the use of water by the mouth and rectum in the treatment of typhoid fever.

Dr. W. E. Forest, of New York, published a very interest-

ing article in the *Medical Record*, of September 19th, 1891, which I read with much pleasure, as it was upon the same line I was then experimenting, and our plans were almost identical. His history of cases is more minute than I shall be able to give, as I did not measure the quantity of urine passed daily, nor its specific gravity.

Experiment 1st.—I was called to see Mrs. M., who had been sick with typhoid fever for ten or twelve days, and under the treatment of a physician. The patient, when in health, is a very frail woman, and I found her extremely feeble and helpless, with all of the symptoms usually met in a severe case of this fever. Temperature range, morning 103° , to $104\frac{1}{2}^{\circ}$ in the evening. She informed me that she had, at best, an extremely delicate stomach, and that in her present condition she could not take any medicine, and very little food.

It occurred to me that this was a fit subject with which to utilize the suggestions of Dr. Debone and Prof. Cantini, in the use of internal water baths for reducing the temperature. I directed that an enema of half gallon of warm water be given every morning, and one gallon in the evening, and if the temperature was not sensibly reduced, to repeat in one hour. In addition to this, I had cold cloths placed over the bowels and renewed frequently. The nurse was directed to give all the cold water the patient could be prevailed on to drink. Milk and whiskey were given as freely by the mouth as she could take, and beef extract by enema at intervals, day and night. This course was regularly carried out, and although there was an increase in daily temperature for several days, and aggravation of the symptoms, causing the case to look more unfavorable, the warm water flushings were repeated oftener, with the result of establishing copious diuresis, followed by diminution of temperature and partial subsidence of the more alarming symptoms. The water plan was continued, and the fever rapidly yielded. In twenty days from the first, convalescence was so pronounced that the patient was discharged. Convalescence, in this case, seemed to be more rapid than ordinarily observed in typhoid fever patients with such threatening symptoms. This is the first case in my professional career of thirty-four years that I have treated without medicine.

Experiment 2nd.—Dr. C. S. Webb, my associate, visited Mr. Y., of Virginia, recently moved to this city, who seemed

to have a mild attack of malarial fever, but instead of yielding promptly to the usual treatment of such a case, the remission became less marked, and in a week the temperature range morning and evening indicated fever.

I suggested to him to try the warm water flushing of the bowels and copious draughts of cold water. He used by enema nearly a gallon of warm water at 10 o'clock A. M., and directed him to drink a glass of cold water every half hour during the day. I visited him the next day, when he said he felt that he had drunk a barrel of water, and would never want any more. The following day he could hardly find vessels in his room sufficient to hold the urine he passed during the night, but he said he felt stronger and better—and this was true.

The flushings and draughts of cold water were kept up for a few days, and the patient continued rapidly to improve. He was soon entirely well and went on a visit to his home in Virginia.

Experiment 3.—Was called to visit Mrs. C., age over seventy, with a marked case of typhoid fever—temperature ranging from $102\frac{1}{2}^{\circ}$ A. M., to 104° P. M. Began at once the warm water flushings, morning and evening; and after the latter, gave half pint of milk and half pint of warm water by enema, which was allowed to remain. Although the patient lay in a comatose condition for several days, and was threatened with heart failure, she rallied under the treatment, and in two days was convalescent. She was allowed all the water she could drink, and a table-spoonful of whiskey in milk every three hours when she could be induced to take it. Beef extract was given by the rectum at intervals between the flushings.

Experiment 4.—Mamie J., age 5 years, was found on my first visit to have a typical case of typhoid fever. Her older sister was taken on the same day of the same month with a similar attack over a year ago. Flushing the bowels was begun at once, and copious draughts of cold water (not iced) were frequently given during the day. In twenty-four hours, she had free perspiration and diuresis; the temperature was reduced, and never again reached so high a mark; the treatment was kept up daily. Mamie's convalescence began in twelve days, while that of her older sister under the usual treatment, did not begin for thirty days.

I could mention other cases treated with equally favorable results, but this article is already longer than I intended.

ART. III.—Hæmoglobinuria.*

By DAVID STREETT, M. D., of Baltimore, Md.

DEAN OF THE BALTIMORE MEDICAL COLLEGE.

Hæmoglobinuria is a pathological condition in which an essential feature is the presence of hæmoglobin in the renal excretion.

Being secondary to hæmoglobinæmia, it is not, *per se*, a disease, but one of the clinical phenomena occurring during the *progress* of a very obscure condition.

Hæmoglobinæmia, itself the effect of an occult process, is a step nearer the *primary* cause than hæmoglobinuria.

Nosologically, therefore, we know not in what category to place it; *convenience* suggests that for the present it be placed among diseases of those organs, the resulting perversion of whose function yields the most salient symptom by which it is recognized. So far as is known, the primary lesion is the vacation of the stroma of the red blood corpuscle by its component, hæmoglobin.

The latter is composed of hæmatin, a substance containing iron, and a colorless, proteid body, closely allied to, or identical with, globulin. In the blood, in this disease, are found phantom cells, or shadows of cells—the colorless bodies of red blood corpuscles devoid of hæmoglobin. The blood, therefore, contains, dissolved in its serum, free hæmoglobin, rendering it brighter red than normal blood serum.

The kidneys are normal in size, or somewhat enlarged, and occasionally inflamed.

Ponfick, Lebedeff, Litten, and Lassar believe that nephritis, though *secondary*, is *invariably* present. The convoluted and straight tubules are filled with plugs of hæmoglobin—a reddish, fine, granular, or amorphous powder.

Some of the epithelium of the tubules is affected by cloudy swelling of the cell protoplasm, and some of the

* Read at the Seven Hundred and Thirty Fourth Meeting of the Medical and Surgical Society of Baltimore, January 14th, 1892.

cells are detached subsequently to their degeneration. Dr. Bridges Adams has shown that hæmoglobin is found within Bowman's capsule—a fact of *much importance*, indicating that hæmoglobin is eliminated within the *capsule directly* from the glomeruli, and *subsequently* passes down into the tubes; and that it is *not excreted* by the glandular epithelium. The degeneration of the tubes is, therefore, probably due to interference with their *nutrition* by *pressure* of plugs of hæmoglobin, or by reason of its *presence* only.

Examination of the blood during a paroxysm shows the presence of microcytes and poikilocytes. The kidneys are of a dark chocolate color, and on section present a brownish, striated appearance.

Hæmoglobin is also deposited in the spleen, which is usually of normal size, or somewhat enlarged and pigmented. It is likewise deposited within the liver and marrow of bones. Hoffman describes a case in which the medulla of the upper half of the femur was of a dark brown color. The skin is icteric from deposition of hæmatin in its structure.

Ecchymoses have been observed in the mucous membrane of the stomach and intestines. Mild attacks of hæmoglobinuria are inaugurated by *correspondingly* mild symptoms, such as slight headache, thirst, gaping or yawning, malaise, and debility, and followed by voiding renal excretions having a dark or chocolate brown appearance. In a few hours, the symptoms have disappeared, and the fluid excreted by the kidneys is normal or pale in appearance, and the invalid is as well as usual except the slight langor and debility which succeeds the attack.

In cases of *average* or *greater* severity, the attacks are sudden, and ushered in by a chill or chilly sensations, with gaping, nausea, great physical depression, general malaise, pain in head and limbs, and thirst. This is followed by rise of temperature to 101° F. or 103° F., increased cephalalgia, thirst, and vomiting. Some cases at this period have subnormal temperature and a pulse less frequent than the

normal, with skin cold and cyanosis in cheeks, nose, and lips.

In those cases with rise of temperature and frequent pulse—110 to 120 per minute—this condition is maintained for several days, and then followed by the great physical depression, with ashy pale lips and skin covered with cold, clammy perspiration, characteristic of the cases marked by profound depression during the first stage. In cases with cold skin, there is usually a pale or dusky color of the hands and feet, as well as of the lips, ears, and nose. This cyanosis may continue for several days, and the circulation may not be re-established in the ears, parts of which have been known to slough. The condition at *this* time approaches that of collapse. Jaundice ensues, beginning to appear in about twenty-four or forty-eight hours after commencement of the attack—the yellowish discoloration of skin and sclerotic becoming marked. The nausea, which begins with the advent of the disease, is *distressing*, culminating in *vomiting* and *continuous gastric tenesmus*. Tenderness on pressure may be marked over the epigastrium; in cases with *this* condition, it is presumable that gastro-enteritis, either *primary* or *secondary*, is present, the result of which would be, in some cases, to supplement the icteroid condition of skin and other tissues with hepatic jaundice. Though thirst is *prominent*, appetite is very *indifferent*, and may be absent. The alvine evacuations are usually frequent, but the opposite may prevail. Pain in back and limbs is very *pronounced*, and *headache* is sometimes *very distressing*. Pain may be marked over the hepatic area. Cases due to the malarial organism have severe paroxysms, and are liable to recur until arrested by quinia or other appropriate medication.

Urticaria may contribute to the general discomfort. The attacks may recur several times per day or week. Dysuria may be present, indicating either *cystic* or *reflex renal* irritation.

The renal excretion has a sanguinolent appearance, and stains white surfaces *similarly* to blood. It is of a dark red,

chocolate, or purple color, *acid* in re-action, has a specific gravity ranging from 1005 to 1015; and, upon being tested with heat and nitric acid, yields a coagulum, *smoky* in color and floating on *top* of the liquid in test tube, instead of *precipitating*, as serum-albumen *usually* does. This is *presumably* the *globulin* of the *hæmoglobin*, which was dissolved in the blood *serum*, and is *now* eliminated by the kidneys. Microscopical examination reveals the presence of hyaline casts, some of which have adherent, reddish granules, and casts of the same reddish material, a few detached and degenerated cells of the tubules, and a *field covered* with a fine reddish, amorphous material. Blood cells are *conspicuously* absent; *occasionally*, but *rarely*, phantom cells are seen. Iron is also revealed in the urine by chemical examination.

Crystals of oxalate of calcium are sometimes present, and, *rarely*, crystals of hæmoglobin.

Dr. Druit, writing in *Medical Times and Gazette* in 1873, describes the attack of hæmoglobinuria, as occurring in himself, as causing wet and cold sensations, with cramps, bluish color in palms and soles, a clammy and cold choleraic feeling, with numbness in right foot and left hand, and nose pale, red, or dark purple. His pulse fell to 55 per minute before the paroxysms. In severe cases, the condition of the patient may remain critical for three or four days, with pulse of 116 or 120 per minute, nausea, and jaundice. *Re-action* sets in, and *convalescence* is rapid—the renal excretion becoming pale, free of albumen, and of low specific gravity. Well-marked anæmia follows, and may remain for *weeks*, and, in *chronic* cases, for *years*.

As presented in *practice*, hæmoglobinuria is generally due to the action of cold. Those predisposed to it experience attacks, after exposure to *cold* in a *humid* atmosphere, more frequently than in a dry one. Getting the feet or body wet, or sitting in wet garments, will frequently develop a paroxysm. Some have it by simply dipping their hands or feet in cold water. Some of those so predisposed experience an attack after exposure to a slight draught, or after slight expo-

sure before or soon after breakfast, when the body is less able to resist any extraneous influences. These cases may be prevented by avoiding contact with cold air until *digestion* is *complete*. It occurs more frequently in fall, winter and spring than in summer.

Ehrlich, in 1881, demonstrated the potency of cold in exciting paroxysms of this disease by applying elastic ligatures near the end of finger; then dipping a finger in iced water for fifteen minutes, and subsequently holding it in tepid water for an equal time. Examination of blood drawn from the end of the finger showed microcytes, poikilocytes, and phantom cells. *Intense* cold will also cause it, as in frost-bite. The opposite extreme, *high* temperature, has the *same* effect, particularly where a large surface of the body is burned, and after sunstroke. Anxiety, worry, late study and little sleep, are set down as causes.

It may *accompany* or *follow any* of the infectious diseases—malaria, typhoid fever (rarely), diphtheria, scarlatina, and syphilis. Occurring during the progress of diphtheria, it is probably due, in most cases, to the administration of *large* doses of chlorate of potash—it being *conceded* that *this* substance causes *more* cases than *all other* medical remedies combined. Among other substances causing it, when taken internally, are carbolic acid, creosote, naphthol, pyrogallie acid, nitro-benzol, arseniuretted hydrogen, sulphuric acid, hydrochloric acid, glycerine, and even distilled water, when administered hypodermically. In case of primary hepatic jaundice, the absorption of biliary salts causes it.

Eitner reports four cases, embracing a professor and three of his pupils, who suffered from an attack caused by repeating Tyndall's experiment of inhaling gas, for the purpose of showing that the *pitch* of the *voice* is altered by it. The professor suffered several repetitions of the attack before discovering its cause, which he found to be arseniuretted hydrogen; the zinc used in generating the hydrogen was impregnated with arsenic.

The edible mushroom, *hélveola esculenta*, contains a substance which causes the disease in a severe form.

Violent or prolonged physical exertion, and, in some cases, even *moderate* muscular exercise, excites an attack. It is occasionally caused by the gentle action required in making the morning toilet. In these cases, it can be prevented by drinking hot coffee or broth before rising. It occurs in males more frequently than females—probably *not* because of the greater proportion of hæmoglobin in the blood of the former, but of the greater *exposure* of the former to *causes producing* it. It occurs in young adults, and *generally* before 50 years of age. Purpura *may* predispose to it. Morning seems to favor the attack, possibly because it is often caused by cold, and in the morning the temperature of the body is lowest.

Winckel, in 1879, reported a remarkable outbreak in the Maternite in Dresden, where, between March 20th and April 29th, twenty-four infants were attacked by it, of whom twenty-three died. These cases were similar; the infants on the fourth day after birth became cyanosed, collapsed, and died. The excretion of the kidneys contained hæmoglobin, and sections of them showed tubuli plugged by masses of hæmoglobin. The general sanitary condition of the hospital at the time was good.

The malarial organism causes many cases, many having the disease giving histories of suffering from attacks of malarial fever *months* or *years* before.

Tyson states that *all* cases not due to the *hæmorrhagic* diathesis, are caused by malaria.

The *primary* changes occurring in the disease are occult. By *whatever* caused, the hæmoglobin of the red blood corpuscle is *caused* to *vacate* its stroma, and becomes *dissolved* in the blood serum—the stroma *continuing* to circulate for a time as a phantom shell or shadow of a corpuscle.

Hæmoglobin is composed of hæmatin, a substance containing iron, and a proteid substance analgoous to, or identical with globulin. The latter is dissolved by the blood, and *consequently* eliminated by the kidneys in the form of *albumen* and *coloring* matter. The coloring matter is depos-

ited in the skin, kidneys, and liver—in the skin causing jaundice; in the kidneys obstructing the tubuli, deranging the function of the renal epithelium, and impairing the utility of the kidneys as excretory organs. It is *similar* to the bile pigment.

Hæmoglobin is eliminated as oxyhæmoglobin or methæmoglobin, a more stable compound, as shown by spectroscopic analysis.

Hæmoglobinuria is *secondary* to hæmoglobinæmia. It is presumed that the malarial organism causes the disease by directly attacking the red blood corpuscle. Heat and its negative, cold, cause it, by compelling the hæmoglobin to withdraw from the red blood corpuscle, either by *direct* influence, or by some unknown influence, through the nervous system—either *primarily* on cells, or by production of *abnormal* metabolism, generating in the blood substances inimical to the hæmoglobin of the red blood corpuscles.

These *exciting* causes but determine the *date* of attack, in one *predisposed* to the disease.

Headache, stupor, and often the nausea are due to the development of uræmia. The renal secretion is of low specific gravity, contains albumen, casts, little solid matter, a few detached epithelial cells of tubules, and reddish amorphous material.

The general venous system is free of hæmoglobin, when the *primary* blood lesion is in the portal circulation. Those predisposed may *not* have it perceptibly when exposed to a slight degree of cold—the small quantity of hæmoglobin liberated in such cases, passing off as mild albuminuria, devoid of any noticeable discoloration. Once set free in the blood, hæmoglobin is split up into hæmatin and globulin—the hæmatin becoming deposited as bile pigment, and the globulin eliminated as albumen.

In essential icterus, resulting from gastro-duodenitis, or obstructed bile duct in hepatic colic, it is claimed that the biliary salts, being absorbed, cause solution of the hæmoglobin and hæmoglobinuria.

The diagnosis is made by clinical history of chill, nausea, vomiting, malaise, headache, jaundice, history of exposure to cold, to malarial infection, to attack of some acute infectious disease or syphilis, and of attack of hepatic jaundice, its development most frequently in winter, spring, and autumn, and rarely in summer; more frequently in males; history of its following and extensive burn; or of developing in one weighed down with anxiety and business cares, or having to engage in some muscular exertion; and lastly, by examination of the renal excretion, which is found *usually* acid in *reaction*, of *low* specific gravity, *sanguinolent* in appearance, and on chemical examination with heat and nitric acid, yields albumen, which floats as a smoky coagulum at the top of the test tube, instead of precipitating like serum-albumen.

Microscopical examination fails to discover red corpuscles; shadows of corpuscle or phantom cells may be found; hyaline casts are usually present, as well as casts of a granular substance, and abundant reddish amorphous material scattered over field. Crystals of hæmoglobin may be found by placing on a slide a drop of the liquid in question, saturating the same with small crystals of chloride of sodium, and then with glacial acetic acid, evaporating over a gentle heat, and examining with microscope.

Exclude the abnormal color due to administration of san-tonin, logwood, rhubarb, carbolic acid, and creosote

The mildest cases recover in a few hours, the kidneys at end of this time resuming their normal function. Cases of moderate severity recover in two or three days, leaving the invalid in an anæmic and languid condition. The gravity in severe cases depends upon the cause, the degree of hæmoglobinuria, the loss of albumen and emesis; added to this is the *primary* cause, continuing to act until removed.

Nephritis may develop, but usually disappears rapidly, when the hæmoglobinuria disappears.

The disease may recur at *short* intervals, *long* intervals, or never. It may become chronic, and paroxysms may occur frequently—the invalid becoming profoundly anæmic.

Dr. Stephen Mackenzie reported a case which lasted for twenty-three years.

In treating the disease, the primary object is to maintain the normal temperature, and support the enfeebled circulation.

This is best accomplished by placing patients in bed and surrounding them with bags or bottles of hot water, hot bricks, etc., and giving hot drinks, covering well with blankets. If prostration be marked, carbonate of ammonia and brandy may be administered.

Nausea and emesis may be controlled by the usual remedies—creosote and lime water, subnitrate of bismuth, morphia sulphate, and counter-irritation over the epigastrium.

Ergot benefits by lessening the renal circulation, and the rapidity with which hæmoglobin is brought to the kidneys for elimination. The hæmoglobin, being thus gradually filtered out, is less liable to obstruct the renal tubuli, cause irritation or nephritis. Bicarbonate of potash, gr. x, in a glass of sweetened water every four hours, is a good diuretic in these cases. Stimulating diuretics are contra-indicated. The best of all diuretic here, as in many other diseases of the kidneys, is abundance of water. Lithia water conveys benefits by lessening the irritability of the urates.

If the attack be due to the malarial organism, quinia should be given in doses sufficient to arrest it, and prevent the development of other paroxysms.

If indicated, aperients should be used. If a specific history be obtained, mercury and iodide of potash should be given.

During convalescence, the ferruginous tonics are especially indicated; mineral waters containing iron or alum, or both, act kindly. In those evincing a marked predisposition to the disease, from light and trivial causes, a paroxysm may be obviated by dressing with warm woolen underwear, and avoiding exposure to cold or drafts; by abstaining from violent exercise, or, in some cases, even from slight exercise before eating breakfast; by residence in a warm climate;

by removing out of the malarial districts; and by opportunely counteracting, and, if possible, removing any known cause.

ART. IV.—The General Practitioner of the Future.*

By WILLIAM B. GRAVES, M. D., of Orange, R. J.

Fifty years ago, in every town and city, the doctor's word was almost an unwritten law; to-day, the doctor's word is the challenge to debate, question, and bitter argument. The old practitioner—"let us fold him in his buffy coat," sheath his lancet, swathe him in emollient dressings, and lower him into his long, long home, with a last farewell to the man who worked with untiring patience for God, his people, and his native land.

The question, What are we coming to? is followed by the self-preservative question, What am I going to do? As certainly as night is followed by day, and as all labor and professional work must be classed under the category of bread-winning, we, as general practitioners, to use a vulgarism, are as much "in it" as any other class of society. And the question, What will be the future of the general practitioner? is the theme for our discussion this evening.

The general practitioner, as a bread-winner, on a business basis, stands upon a foundation as infirm and treacherous as one can imagine; and why? I will partially answer the question by asking another. Did any of us, twenty-five years ago, ever conceive the idea that the art of medicine should be so subdivided as to admit of and support aurists, oculists, sanitary engineers, medical electricians, opticians, massageists, dermatologists, gynæcologists, etc.? Well, hardly, gentlemen!

Did we ever dream of such opulent charities, private and public, standing under the name of hospitals, infirmaries, dispensaries, clinics, homes for ruptured and crippled, skin

* Read before the Orange Mountain Medical Society, October 16th, 1891.

and cancer hospitals, asylums for the insane, homes for feeble-minded youth, homes for the aged and infirm, asylums for the deaf, dumb and blind, orphan asylums, foundling asylums, homes for fallen women, lying-in hospitals, eye and ear infirmaries, eyes examined free on Saturday afternoons while you wait, all over this broad land? Does this set the mind at work toward the answer? Now add to the list the private sanatoria, private hospitals of specialists, medical and surgical institutes, Pasteur institutes at home and abroad, and we can begin to get a gleam of light on the subject of the business chances of the general practitioner of the future.

Is it a question whether those who ply these several vocations, or these many charitable missions, do good, honest, and intelligent work? No. Is it a question of limitation of the field of the general practitioner? Decidedly, yes; and a resulting narrow field of professional work; and the increase of medical and surgical syndicates will be two of the potent factors which will go to crush him out of existence. We have builded but for our own destruction, with our own implements. The microscope, once our aid; now, our aggressor! The hospital, once our study, now, our winding-sheet! The laboratory, once our pride; now, tolls the death-knell of the last tribes of general practitioners.

The objective glass and the test-tube usher into view the brightest child yet born to the family of Esculapius, and her name is "Preventive Medicine;" and many an old gray head and gray beard will find himself down upon the floor to worship her and watch her growth and development.

Let us transport ourselves one hundred years ahead, and look about us, and listen to the talk of men, and note their methods and modes of living.

For the sake of a place to visit, let us go to Washington. for here is the great centre of medicine in the United States. Here is a Government Department, where doctors are employed to study and search out the causes and cures for all diseases in man and animals, and the great building is filled

with laboratories and libraries of reference. Here it is that the work was done that stamped out forever the recurrence of those dreaded epidemics of our times. Here is the chief of the medical police. In this department is mapped out every water-course, well, cess-pool, and possible source of contamination and contagion all over the Union. Look at the record of buildings giving sanitary conditions of plumbing, methods of heating and ventilating, arrangement of cooking apparatus, and for washing of clothing. To this point come all the medical men in the country to bring their quota of knowledge to benefit mankind. It is here that eternal vigilance is kept up regarding the condition of the healthfulness or disease of the Union and of the whole world. From this point came the edict that citizens evincing serious or dangerous hereditary diseases could not marry; it was from this point came the law that children seriously deformed at birth should not be allowed to continue in existence. Through the influence of this department, this country took its water supply from artesian or bored wells, and all cities and towns now use their incinerators for garbage, and their creamatories.

And what has become of the general practitioner? we ask one of the gentlemen whom we meet. "My dear sir, by a gradual increase in the requirements of graduation for medical degrees, and the increased tuition fees, many are debarred, and very few are now graduated, compared to your time. To-day every city, town, and hamlet, has its hospital or hospitals, accessible to all its citizens, supported by the Government, and officered by medical men appointed by the State or the Government, as the case may be. These men act as medical police, and any case of emergency that cannot be moved is treated on the spot, until, as with all other cases of illness, they are removed to the hospitals of the towns in which they reside."

And how came it about? "Liberal education of all people through the great public educational systems, giving broader views and chances of studying various methods in

later life, was all that was necessary to bring that about." We see no more the general practitioner; at one time those men who were called specialists were so numerous, that they usurped the field of diseases so generally that the "practitioner" had very little to do but to treat a case of whooping cough, or measles, or care for a case of confinement; in fact, accouchment was all that was left for them to do, and they themselves would send their very bread and butter to the specialist rather than take up the study of special diseases themselves.

There are in the large cities private hospitals where the rich and affluent may go if they choose. These are syndicates of medical men, and these have formed stock companies, and furnish those hospitals in palatial style, and appoint them as nearly perfect as medical corps and other services can be made, and the revenue from them is enormous; they are, however, no better than the municipal hospitals. As the best talent in the world is supplied to them, they are well paid for their work, and the hospitals themselves are models of architecture and art.

You know cancerous disease is almost entirely unknown now, as the marriage laws and pathological laboratory have almost stopped its existence. Sanitation, wholesome and plentiful food, have done much to eradicate this dire disease, and the examination before placing on the market of various food products, and the close co-operation of the great agricultural department with the medical department, has done invaluable service in reducing the amount of disease in the country.

The present system of disinfection of foreign products that require it, is as rare as it is unique. What treatment is now in vogue for the cure of consumption, we ask of the friend. He replies, "preventive and climatic."

Architecture, controlled by statute laws founded on hygienic and sanitary principles, has rendered the people less exposed to danger; they are now also better clothed and nourished than formerly. Consumptives are sent as pa-

tients to the public hospitals in States, in mountain regions, or wherever the condition of the patient may seem to necessitate.

Suicide, and insanity in all its forms, are rarely met with; pauperism and all its attendant vices, are things of the past, and the habit of drinking alcoholics has been greatly diminished through the efforts of the department of preventive medicine, and the able teachers of our public schools.

We do not appear surprised at all these changes, for we knew they had to come; they are the direct result of the workings of that pure-minded, liberal, and unselfish man, "the General practitioner."

ART. V.—The Vision of a Case of Myopia Improved by Treatment Without Glasses.

By W. H. BATES, M. D., of New York.

The cure of myopia has long been considered impossible. Helmholtz, von Graefe, Donders, and many other authorities in ophthalmology, make the positive statement that the visual axis of the myopic eye-ball cannot be shortened by treatment. Glasses are usually prescribed to improve the vision of myopia, and the patients are told that nothing else can be done. I wish to call the attention of the profession to the fact that the vision of myopia can be improved very much by treatment without glasses, and that this improvement is often so marked as to render glasses unnecessary.

The indications for treatment vary in different individuals. As a general rule it may be stated that when cocaine applied to the mucous membrane of the nose, produces temporary improvement in the vision, the removal of any abnormality, however slight at that point, will produce permanent improvement in the vision. The converse of this proposition is also true.

Again, when a pressure eye bandage produces temporary improvement in the vision, permanent and greater benefit

may be expected after its use for a variable length of time. Sometimes the pressure bandage is injurious. Atropine is beneficial in some cases, and injurious in others. In general, all methods of treatment should be tentative, and the progress of each case carefully watched.

The following case of progressive myopia is an example of what can be done by treatment.

Miss F., aged 21, has complained of near-sightedness, growing worse for ten days. At first she wore a minus sixteen inch glass, which was gradually increased to a minus ten inch glass. She ascribes the cause of her myopia to reading by a dim light.

October 2nd, 1891, began treatment. Vision without glasses one-fortieth the normal in each eye. With a normal ten inch glass, vision normal. Media clear; posterior staphyloma in each eye. There is a slight conjunctivitis. Patient has attacks of phlyctenular conjunctivitis from time to time. General health is good. Treatment consisted of local applications of nitrate of silver, gr. x to $\frac{5}{16}$, to lids three times a week, the use of a wash of hydrarg. bichlor. 1:5000 three times a day, calomel powder dusted into the eyes once daily, the wearing of a pressure eye bandage at night, treatment of the nose and throat, counter-irritation over the epigastrium, a tonic and tablets of calomel, gr. $\frac{1}{3}$, *ter in die*.

October 9th. Vision no better.

October 12th. Removed a cartilaginous spur from the left septum, which was pressing on the posterior portion of the inferior turbinated bone. The effect of the operation was to permanently improve the vision of both eyes to one-twentieth the normal.

October 23rd. Vision of the left eye improved to one-tenth the normal. The slight conjunctivitis had improved from the use of the local remedies, and the vision seemed to improve at the same time. With the ophthalmoscope, the fundus can be seen clearly without a minus glass, but only occasionally.

October 25th. Under ether; the retrotarsal folds were everted, scarified, and mercuric bichloride 1:500 rubbed in with a tooth brush.

October 30th. Vision of the right eye one-twentieth the normal; vision of the left eye one-tenth + the normal. Mucus discharge from both eyes. With the ophthalmoscope the fundus could not be seen except with a minus ten-inch glass.

November 23rd. Vision of the right eye one-tenth + the normal; vision of the left eye reduced to one-twentieth the normal. The left eye was put under atropine for two days without improvement in the vision. The pressure bandage had been stopped November 5th, because it seemed to cause too much irritation of the lids.

December 8th. Pressure bandage resumed. Vision not improved since November 23rd.

December 18th. Vision improved rapidly to more than one-half the normal. There is still considerable mucus discharge.

December 21st. Removed some adenoid tissue from the vault of the pharynx, without any effect on the vision.

Patient was compelled to leave the city.

In a letter written *December 26th*, the patient reports her vision improved since she was last seen. She feels very grateful for what has already been done for her. For most purposes her vision is sufficient, and she feels more comfortable now *without* glasses than she formerly did when compelled to wear them.

131 West Fifty-sixth street.

ART. VI.—Drug Eruptions.*

By JAMES C. McGUIRE, M. D., of Washington, D. C.

Since the days of Lorry, 1717, who first called attention to the eruptions due to drugs, to within the last few years, we find only isolated cases scattered through medical literature.

It remained for Dr. Prince A. Morrow to systematize the study in his treatise upon *Drug Eruptions*, a book of two hundred pages, to which I refer my hearers for a more extended treatise on this interesting subject.

In this paper, I propose to present a short *resumé* of the theories as to the etiology of drug eruptions, with a clinical report of several cases that have occurred in my personal experience.

* Read before the Medical and Surgical Society of Washington, D. C. December 14, 1891.

About the first theory advanced as to the *causation of drug eruptions* was that they were produced by impurities mixed with the drug. Of course this was abandoned.

Then it was proposed that the rash might be caused by the elimination of the drug, through the skin, depending upon the elective affinity of the drug. For the glandular elements and the saturation of the system, on thorough investigation of iodine lesions by Dr. Thin and others, it was found that the sebaceous glands were not affected, and that the lesions occurred where there were no sebaceous glands, as in cicatricial tissue and the palms of the hands. As to saturation of the system, of course this idea had to be abandoned when it was found that a few grains, as well as a hundred, could produce an eruption; indeed, it has been stated that large doses, in some cases, have no such ill effect.

At the present time, the views held by Prof. Morrow are those that are most generally accepted. He says: "The only correct interpretation of the physiological predisposition (known as idiosyncrasy) as a determining cause of drug eruptions, is based upon a recognition of their neurotic character."

Again he says: "The large majority of cutaneous disturbances are consecutive to absorption of the drug, and due to its specific action upon the peripheral nerves and nerve-centres."

The *diagnosis* of medicinal rashes must depend almost entirely upon their sudden appearance and their equally sudden disappearance on discontinuing the medicine. We cannot depend upon the form or situation of the lesion, as in skin diseases in general, for the reason that the lesion depends more upon idiosyncrasy than the particular drug. Even in the case of iodic eruptions, we do not always find papules or pustules. Several years ago, I reported a case of *Iodide of Ammonium Eruption*, in which the principal lesions were bullæ. The case is unique in that, to my knowledge, it is the only one ever reported of a bullous eruption due to iodide of ammonium. I quote it briefly:

Mr. R., 51 years of age, suffering with broncho-pneumonia. After taking seven doses of a mixture containing iodide of ammonium, gr. iij to the dose, an eruption of vesicles appeared on the face and scalp. Medicine discontinued, and in a few days the rash disappeared. After two weeks, mixture again given in half the former doses. After four doses (about gr. vj of the drug having been taken), the eruption again appeared, and attained its maximum development in ten days after it was discontinued. When I first saw the case, I found an eruption of vesicles and bullæ on the face, scalp, trunk, thighs, and legs. The lesions varied in the size from that of a split pea to a pigeon egg. Those that had not broken down were markedly umbilicated; those that had broken down were discharging bloody serum. Four days later, many bullæ had become confluent, discharging a thicker, sanguineous pus. No new lesions appeared after this. Within a week, they were on a level with the surrounding skin—some having disappeared. Patient died within a few days.

The eruption could not have been due to syphilis, since a vesicular eruption is a most common manifestation of this disease. When it does occur, the vesicles are not so extensive in their distribution; they are not so markedly umbilicated; there are no dark, bloody crusts from these lesions; and other lesions, such as papules, are usually present. Then it is to be remembered that vesicles appeared in this case, quickly increased in size, till they became bullæ the size of pigeon's eggs—the contents, at first bloody serum, soon changing to sanguineous pus, drying up and beginning to fade away, all within ten days. This is not the history of an eruption due to syphilis.

For the sake of convenience, there are given two classifications of drug eruptions: Those that usually follow the administration of the medicine and form a part of its physiological effect, as the acne-like lesions due to the bromides. The second class includes those drugs which do not usually produce an eruption. Under the latter heading are included almost every drug known to the pharmacopœia.

The fact that drugs may cause lesions upon the skin that

are taken for the rashes of the eruptive fevers is illustrated in the following case of *quinine eruption* :

Dr. ——— consulted me in regard to a case he had seen the night before. A boy seven years of age, suffering from sore throat, slight fever, and a rash upon the skin, which caused him to make a diagnosis of scarlatina. but thought it odd that the eruption in places took on a form of eczema. I found the child with an erythematous rash upon the abdomen and chest, and a profuse vesicular eruption upon the face. On questioning the mother closely, it was found that the child had had several previous attacks like this one. She had given him six grains of quinine for the sore throat. The rash broke out during the night. Within a few days, the breaking out had disappeared, and the patient had entirely recovered. The attending physician still being in some doubt as to the etiological factor, gave the patient two grains of quinine three times a day. The same lesions appeared on the skin within three days; these soon disappeared after the quinine was discontinued. There has been no recurrence within the following year.

Several years ago, I knew a prominent specialist, who mistook a case of syphilis for an iodide of potash eruption. The patient, who gave no history of syphilis, had been taking ten grains of iodide of potash three times a day for a week. He had not suffered from rheumatic pains, sore throat, or loss of hair. A few petechiæ were scattered about the legs and thighs; a small flat papular eruption appeared on the forehead, and some papules upon the abdomen and back. A week later, enlarged submaxillary glands developed, and a mucous patch appeared upon the gums. A typical papular syphilide was discovered, when the dermatologist was forced to make a diagnosis of syphilis.

Mr. H———, druggist, first called my attention to the fact that *whiskey taken with phenacetine*, or within an hour after, would intensify the erythema. In fact, this eruption is sometimes caused by this drug. Since then, I have seen several cases. In my own person, a drink of whiskey following gr. x of phenacetine, in a few minutes will produce wheals upon my face and neck, accompanied by intense itching and swelling of the parts.

In 1887, I reported in the *Journal of Cutaneous and Genito-Urinary Diseases*, several cases of *copabia eruption*. Within the last month I have seen another case. They were all characterized by a bluish red erythematous rash, more or less generalized, leaving only small round spaces of healthy skin. The erythema ended abruptly at the margin of these spots, but there were no subjective symptoms. In each case the gonorrhœal discharge ceased while the symptom was at its height. The dose in the last case was gtt. xx three times daily.

An interesting case of *chloral eruption* was that of Mrs. C., whom I have attended for alopecia. She has taken chloral in ten-grain doses every month to relieve the intense headaches with which she has suffered at the menstrual periods. The next day her face is slightly red and swollen, but if she takes alcohol in any form, even a glass of sherry, within three days, a diffuse hyperæmia appears on the face and neck, accompanied by heat and itching. This has happened many times, and is not an exceptional occurrence with her.

I could report many cases of drug eruptions that have occurred in my experience, but it is simply my desire to call attention to their occurrence, and to provoke a discussion, that I have reported these few cases.

ART. VII.—Coca—A Case of Poisoning by Cocaine.*

By JOHNSON ELIOT, M. D., of Washington, D. C.

Dujardin-Beaumetz wrote in 1886, "Cocaine remains thus far the only local anæsthetic of mucous membranes of wide application, and this fact renders the introduction of this alkaloid into medicine, one of the most precious therapeutic acquisitions of this age." This being the case, no apology is offered for introducing cocaine for your consideration,

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, December 14th, 1891.

although Dr. E. L. Shurley in speaking of new remedies, has said: "*Cocaine*.—As medical literature is surfeited with items regarding this remarkable drug, I will spare your feelings and pass it by."

Cocaine was isolated from coca erythroxyton by Dr. Niemann, in 1860. It occurs in bitter crystals of alkaline reaction, melting at 208° F., soluble in ether, alcohol, and 104 parts of water at 53.6° F; its chemical formula is $C_7 H_{21} NO_4$, and forms many salts, the principle of which are the hydrochlorate, borate, sulphate, nitrate, oxalate, tannate, salicylate, citrate, hydrobromate, tartrate, and oleate.

One pound of the leaves contains about fifty grains of cocaine.

The physiological action of cocaine is so similar to the action of coca, whose properties depend entirely on the cocaine it contains, that they will be treated together, and what is said of the one, will hold good of the other.

Coca is generally preferred for internal administration, and cocaine and its salts for their local anæsthetic properties.

Cocaine is a stimulant to the central nervous system, acting first on the cerebrum, then on the medulla, then on the cord. Large doses cause headache, disturbance of memory, and inco-ordination of thought, vertigo, a pleasing flow of ideas, and a tendency to write, loquacity, or a tendency to exaggeration and to quarrel. It is a cerebral excitant, causing hallucinations, a feeling of strength, and a desire to exert oneself, followed by a self-satisfied condition, and finally sleep. The action of the heart is increased, and palpitation may be noticed; the arterial pressure is raised by stimulating the vaso-motor centers in the medulla, as is proven by section of the cord, first acting on the vaso-constrictors then on the vaso-dilators.

The posterior columns of the cord are stimulated, then paralyzed, together with the entire system of peripheral sensory nerves; the sympathetic fibres are depressed; the anterior columns and peripheral motor nerves are not para-

lyzed. The reflexes—especially those of the patellar tendon—are increased. Slight deafness is noticed, and large doses cause tinnitus.

Respiratory action is increased, which in fatal cases soon becomes shallow, then irregular, then ceases, stopping before the cardiac cessation. Death is due to paralysis of respiration.

Large doses increase the temperature of the skin, but diminish its activity. On the gastro-intestinal tract, it increases the secretions, soon followed by dryness and anæsthesia; peristalsis, at first increased, becomes lessened, until it finally stops—in this way giving rise to constipation. The sensations of hunger and thirst are also held in abeyance—Mantegazza having fasted for forty hours without material discomfort while under its influence. Coca is eliminated by the kidneys, diminishing the quantity of urine and the excretion of urea. In Brower's cases, the urine was loaded with uric acid and the urates.

Applied locally, it dilates the pupil and impairs accommodation. It has caused photophobia, exfoliation of corneal epithelium, vesicular keratitis, and acute glaucoma. No bad effects on the vision have been noted.

The effects of cocaine are not cumulative. It is said to be an aphrodisiac.

A solution after standing a few days develops a fungus; it may also become darker, but neither of these changes effect its properties as an anæsthetic. Salicylic, boracic, and carbolic acids render the solution stable.

Without detailing cases in which poisoning occurred, you are referred to the articles of Dr. J. B. Mattison, of Brooklyn, who also sums up the pathology thus: "There was marked congestion of the brain, lungs, liver, and kidneys," and he further states that the smallest fatal dose recorded was eight drops of a four per cent. solution used hypodermically, and the largest non-fatal dose twenty-five grains by the mouth.

The preparations and doses generally used are as follows:

Cocaine, gr. $\frac{1}{8}$ -1; cocaine hydrochlorate, gr. $\frac{1}{8}$ -1; powdered leaves of coca erythroxyton, gr. x—xxv; fluid extract, \mathfrak{z} j—ij; solid extract, gr. x—xxv; elixir, \mathfrak{z} ij; cordial, \mathfrak{z} ij—iv.

I have refrained from mentioning the therapeutic applications of coca and cocaine, as they have been used in almost every disease, with and without reason. The conclusions I wish to present, as drawn from a study of the literature of the drug, are—

- 1st. Coca is a stimulant to the cerebrum.
- 2nd. It is useful as a substitute for opium and alcohol.
- 3rd. It is a valuable agent in the treatment of neurasthenia.
- 4th. Cocaine reaches the acme of its application in surgery, special as well as general.

5th. It is a dangerous drug, and must not be placed in the hands of the public without restriction.

I will close with the history of a case of cocaine poisoning occurring in my own practice :

R., age 27 years, male, physician, applied for relief from acute naso-pharyngitis. He had used, previous to consultation, a twenty per cent. solution in Dobell's solution as a gargle. The neuralgic symptoms were great pain radiating in all directions, even to the shoulders. Marked fever and accelerated pulse. Throat intolerant to applications. Nostrials were sprayed with Dobell's solution; then, with spray of pinus canadensis; he was also given gr. $\frac{1}{500}$ aconitia every hour, Hancock's sedative lozenge, and a saline purge. About two o'clock of the same day, the patient was seen again; condition unchanged; he was given antikamnia—three eight grain doses, but it failed to relieve the pain.

About seven o'clock he was seen again—suffering still intensely. A four per cent. solution of cocaine hydrochlorate—possibly half a drachm—was sprayed into the nostrils. In two or three minutes, the patient became dizzy, walked across the room, and fell on a sofa; complained of nausea and weakness. Pupils became dilated, and eyes assumed a vacant stare; pulse rose rapidly, and forehead became bathed with perspiration; limbs cold, and patient became pale. Respirations became feeble. Did not lose consciousness, although he did not answer questions addressed to him; he told me afterwards he

could not distinguish what I had said, but had heard me. He was given $\bar{5}$ ij of whiskey, and in a few minutes felt well with the exception of nausea—the pain having disappeared.

An attempt to rise brought on a return of the weakness, vertigo, and the condition already mentioned. He was given more whiskey with good effect. A third attempt to arise and go about the room brought back the above symptoms, which yielded to gr. $\frac{1}{100}$ of atropia. Aconitia had been discontinued.

In about an hour, he walked home; pain recurred, and he had a bad night, taking opium to relieve pain and induce sleep, and whiskey to relieve weakness.

The next day, to confirm the diagnosis of cocaine poisoning, he, at his suggestion, was subjected to the cocaine spray, which brought on the same toxic symptoms.

918 *E Street, N. W.*

ART. VIII.—Tic Douloureux of Reflex Origin—Diagnosis and Treatment.

By JOHN DUNN, M. D., of Richmond, Va.

Mr. E., aged 44, says that for more than fifteen years he has suffered with severe neuralgia of the left side of his face. Although during this period the pain has not been constantly present in all its severity, there has always been present a sense of discomfort about the région of the left eye. The neuralgic attacks would come and go, and had lasted as long as five weeks at a time. During these attacks nothing would give him relief. He has tried everything suggested—from liniments, so strong that they burnt the skin from his forehead, to morphine. The attacks generally came on gradually, sending ahead to herald their approach a spasmodic twitching of the lids. He got worse and worse, until at times he thought his "eyes would pop from his head," and that "his head would part in the middle," so great was the pain. The bone surrounding the eye would become extremely sore and painful to the touch, and has remained so as long as five months at a time. When the attacks were at their height, his friends would tell him "his left eye was smaller than his right;" the pain would extend to the nape of the neck, and he would become sick at the

stomach. These attacks would last several hours, and then his "eye would supple up"—only to return the next day with the same or increasing severity. At times, the pain would be worse in the day; at times, worse at night. During the last attack it began in the morning, and lasted until five to six in the evening.

Mr. E. was seen during one of the attacks which had lasted about three weeks, and was so severe that he had to tell his employers he could not work. At this time he was wearing a handkerchief tied across his forehead covering his left eye, which was the seat of the pain. On removing the handkerchief, and passing the finger around the orbit, the points of emergence of the supra-orbital, infra-orbital, and nasal nerves, were found to be the points of greatest tenderness. At times, Mr. E. says, when the pain was at its height, it would extend down his left cheek to the canine tooth of this side. Vision of this eye was found to be normal.

On questioning, Mr. E. said that he suffered from "catarrh," that there was more or less constantly present a thin, watery discharge from the left nostril, while he was much annoyed by a "dropping of mucus into his throat from his nose," and that his "nose was stopped up a good part of the time." Examination of the nose anteriorly showed some slight hypertrophy of the inferior turbinates; posteriorly, both inferior turbinates were hypertrophied—the left until it touched the septum; the left middle turbinate showed considerable *white* hypertrophy (the cause, *en passant*, of the watery discharge from this nostril; and the cause in many cases of nasal hydrarhœa). Otherwise the nasal and post-nasal spaces were normal.

On the application through the naso-pharynx of some cocaine upon a probe to the posterior end of the left inferior turbinate, Mr. E. exclaimed that the pressure caused an acute, lightning-like pain to dart down the left side his nose. The left nasal cavity was then sprayed with cocaine, and after a minute, Mr. E. said that he felt little pain about his eye. These last two facts showed as plainly as the sequence is ever shown in things medical, that the *tic douloureux* was reflex upon the condition of the nose. The posterior end of the left inferior turbinate was removed, and the neuralgia about the eye disappeared.

Mr. E., about an hour later, pulled out his watch and said, "it is now 11 o'clock, and this eye ought to be roaving, but there is no pain in it." He returned to his work the following day, the neuralgia having disappeared entirely. I have seen

him three times since, and there has been no return of the neuralgia.

The history of this case furnishes a further plea, to the many existing ones, against the use of electricity, morphine, chloral, antipyrin, antikamnia, and all the other antis, strychnine, belladonna, etc., etc., in all cases of persistent facial neuralgia where there has not been made a careful search, many times repeated, if necessary, of the eye, ear, and nose especially, of the other parts of the body too, for a cause of these neuralgic pains. The search will not always be successful; but there is reason to believe that many, and personally, I believe the vast majority of all cases of persistent facial neuralgias are reflex, and can be cured.

The above case shows what? A case of tic douloureux. It has existed intermittently for fifteen years. All internal and external remedies, quack and professional, suggested, have been tried. The *va et vient* of the neuralgia was in no wise affected by them. During all this time no one ever made an examination of the eye—the to-day recognized manufacturer of headache and ocular neuralgia; or of the nose, the study of which is daily throwing more and more light upon its intimate reflex connection with the nervous supply of the throat, especially, and of the face. The pressure of the probe upon the posterior end of the inferior turbinate, causing a sharp pain to shoot through the skin covering the corresponding side of the nose, showed that the seat of the reflex disturbance was not far from the point of the probe. The action of the cocaine in deadening the sensation of the nasal mucous membrane, and especially in contracting the swollen tissues, thereby causing a cessation of the neuralgia about the eye, showed how slight was the cause that could produce such persistent painful neuralgic attacks. The removal of hypertrophy, followed by the “making of a new eye,” showed the seat of the cause.

The posterior hypertrophy of the inferior turbinate of the left side, was the prime factor in this case of tic; whether, however, the reflex pain was due simply to the hypertrophy,

or the pressure of the hypertrophied tissue against the septum is a question. Hypertrophy of the posterior end of the inferior turbinate, is a common affection, and its so-called "catarrhal disturbances" are definite within certain limits. Its "reflex disturbances" are more vague, and produce most frequently various illy-defined unpleasant sensations in the throat often, especially in women, the sensation of choking. It is probable that the tic was brought about by the pressure of the turbinate upon the septum, and this would seemingly indicate a hyper-sensitive condition of the septum. Not necessarily so, however, since the supposition that the point of contact between the hypertrophied turbinate, and the septum may have been over the passage of a nerve filament, so situated that the pressure was directly against the filament forcing it against the bone beneath, is not improbable. For example, the pressure of the hand over the brow, at first not unpleasant, will become unpleasant in proportion to the length of time the pressure is kept up, and the force exerted by the pressure; but the unpleasant sensations need not be acutely painful, the pressure of the finger over the supra-orbital nerve, forcing it against the bone soon becomes excruciatingly painful. So it seems it may be with hypertrophy of the posterior end of the inferior turbinate—where the hypertrophy is in such lines that the pressure exerted against the mucous membrane of the septum is a general rather than a point pressure; the reflex disturbances will be correspondingly dull, and may give rise to reflex functional disturbances. But where the hypertrophy is capable of point pressure, and when this point is against a nerve filament, and at times even when it is not, the reflex may be a painful one, *i. e.*, "neuralgic."

In general, simply hypertrophy of the turbinate bones, where the hypertrophy is free, does not give rise to reflex disturbances; but where the hypertrophy is such as to produce pressure upon the septum, there may be reflex disturbance.

Not all cases of tic douloureux can be so quickly cured,

but the fact that one case has been so cured, shows the superiority of searching for a definite cause, over the trying at random of each of the remedies given in the *materia medica*. In reflex troubles, one minute with the cause is better than a lifetime with the effects.

The patient was seen when the tic was at its height, and this fact facilitated the discovery of the cause; and gives an important aid in the determination of facial neuralgia, due to intra-nasal trouble. If a patient have persistent unilateral facial neuralgia, which is capable of spasmodic exacerbations, the proper way to determine whether it be reflex upon some abnormal intra-nasal condition would seem to be as follows: Examine and note the condition of the nose anteriorly and posteriorly, and for the posterior examination the palate retractor is indispensable when we would see all that is to be seen of the intra-nasal spaces. The patient should then be questioned as to whether he has been conscious of any nasal trouble—its character and duration. The examination of the nose should be made before questioning the patient, that we may have our first ideas free from the adulteration that suggestions from the patient make in them. We may then use our probe against and about all the abnormalities in the nose to see if we can, by pressure, increase or cause perceptible change in the intensity of the neuralgia. Whether we fail or not, we may then spray the side of the nose corresponding to the side of the face upon which the neuralgia is present with a cocaine solution. After a minute or so, when the cocaine has contracted the nasal mucous coverings, we may note whether there has been any real abatement in the neuralgia. If it noticeably ceases after the application of the cocaine, we may fairly assume that the pain is reflex upon the intra-nasal condition.

Our next duty is to search again for the reflex point with the probe. We may be successful; we may not be. In the presence of tic douloureux not due to a known cause, it is our duty to put the nose into as nearly a healthy con-

dition as possible with our means, whether we have or have not discovered the reflex point; and this, especially, since there are intra-nasal conditions which cocaine cannot alter sufficiently to make it the crucial test as to whether the neuralgia is or is not reflex upon the intra-nasal condition.

Cases of tic douloureux reflex upon nose trouble have been reported, and more cases will be reported when less importance is attached to the uses of medicinal agents, and the possible reflex nature of the trouble is more generally recognized.

As said above, it is advisable that the patient be examined when the neuralgia is present rather than in the periods when it is absent, since valuable information can be gained at this time; and, too, if we are able to effect a cure, the relief obtained will be more pleasing to the physician, and more acceptable to the patient.

It is out of place here to mention the various intra-nasal conditions which might be the cause of tic douloureux, or the methods employed for their relief. There is one other point to be emphasized. Repeated examinations should be made when we fail at first to discover the reflex point. Reliance upon drugs to effect a cure is an acknowledgment that we know nothing of the cause of the trouble; and when in a case of tic douloureux, we give up our search for the cause, we should, in justice, give up our patient also, for our drug efforts will accomplish no good.

218 *E. Franklin Street.*

The uncertain strength of Coca leaves make this drug very unreliable, unless a preparation is used, which we know to be made of a good leaf. "Robinson's Wine Coca" is prepared by percolating assayed Coca Leaves with Malaga Wine, and has always been found entirely satisfactory.

Correspondence.

Abuse of Hospitals by Pay Patients—Bantock's Methods—Antiseptics Giving way before Asepsis—Operations for Uterine Cancer Laid Aside—Hutchinson's Amputation of Tongue with Ecraseur—Sims' Position Adopted.

G. C. CANNADAY, M. D., of Roanoke, Va.

Mr. Editor,—If there exists one thing more detrimental to the medical profession here than the hospitals, I have not seen it. So many who are able to pay visit them, and the hospitals seem to make no attempt to suppress this imposition. There are also many poor physicians who suffer from this abuse. I do not think a patient should be received unless having a certificate from a reliable source stating his inability to pay.

At this time very few American physicians are in London, and well they are not, for London in summer may be all right, but London in winter is intolerable to an American.

Laparotomies are not so numerous as formerly. A considerable degree of judgment is being used in the selection of cases, and more attention is being paid towards arriving at a definite diagnosis prior to rushing into an exploratory laparotomy, determined to do something.

Moreover, there is an inclination to refer these cases to specialists who are qualified to do them, and preferably to special hospitals, or to quiet homes, where the minutest details can be carried out with accuracy.

The mania for beng Tait's, and Martins, and Bantocks, has, in a great measure, subsided, with the non-accomplishment of their aims, in a few years.

Dr. George Granville Bantock (who I may mention as the acknowledged equal, if not the superior laparotomist of London), does not think benefit can be obtained in fibroids of the uterus from either medicine or electricity, and invariably resorts to the knife for their removal. His cases are thoroughly diagnosed before operating, and his celerity, cou-

pled with his dexterity, accounts for his wonderful success. For multiple fibroma of the uterus he performs removal of the whole uterus and appendages when possible; and as to the intra-peritoneal method, he does not think much of it (and it seems to be generally condemned by most London gynæcologists). He treats only by extra-peritoneal method, using one or more large needles inserted through the pedicle transversely, and using a wire composed of a metal thrown around the pedicle and tightened by the serrenœud. This he gives a sharp turn daily. His reports, which may be relied on, are sufficient evidence of this being, by far, safer than intra-peritoneal methods.

It is pleasing to note, and it will be gratifying to the patient as well as beneficial, that the abdominal cavity is no longer made the receptacle of all kinds of antiseptic solutions. For every operation, antiseptics are used for instruments, sponges, and for cleansing the skin, but not for the internal parts, unless pus or effete matter has escaped into its cavity, in which event an exceedingly weak solution is used. Re-action is taking place in favor of asepsis when circumstances will at all favor it.

The custom of operating for carcinoma of the uterus and vagina has been entirely abandoned—surgeons such as Mansell, Monlin, Oliver, and Meredith, claiming that it does not retard the progress of the disease. When the carcinoma is vaginal or cervical, preference is given to the curette, followed by the actual cautery.

I do not think as much medicine is given here altogether, as in the United States.

Dr. Johnathan Hutchinson for removal, of the tongue, has for the past twelve years employed only the ordinary screw ecraseur, armed with a loop of well-tempered wire, consuming from one half to one hour in its removal; if the amputation is to be made far back, the jaw is divided back to sufficient extent to admit the proper application of the wire. The advantages claimed for it over the one by electricity, is the absence of secondary hæmorrhage; and over

amputation with the knife, its simplicity. He operates extensively, and claims to have not lost a case by this method in twelve years.

Sims' position has entirely taken the place of all others for any ordinary examination. Many used to decry it as giving undue exposure to the patient; but Dr. Mansell Monlin is authority for stating, that most ladies, especially in the upper classes, are pronounced in opposition to the dorsal position.

Influenza has been, and is now very prevalent; depressants are evidently badly borne, and due care should be taken of the patient during convalescence. At a recent discussion on influenza by the London Medical Society, Dr. Lynus Thompson claimed that it had special tendency to produce nerve depression, and that pulmonary troubles arose from removal of nerve control—the vagus evidently being often affected.

Dr. Goodhart considers most cases of asthma as neurotic, and occurring in nervous individuals, and treats them accordingly.

No 4, Granville Place, London Square.

London, Eng., January 4th, 1892.

Proceedings of Societies, Boards, etc

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

[Meeting of December 14th, 1891.]

LLEWELLYN ELIOT, M. D., Secretary, Etc.

Dr. James C. McGuire read a paper on—

Drug Eruptions. See page 943.

Discussion.—Dr. J. V. Carraher said that some years ago when in charge of several hundred laborers, about thirty of them were affected simultaneously with an eruption, which, upon investigation, proved to be the result of copaiba. Instances like these would lead to the supposition of a contagious exanthem, but he was, in all of his cases, able to trace the cause to the copaiba.

Dr. R. S. Hill related the case of a debilitated woman, in whom three doses of two and a half grains of sulphate of quinine caused great swelling of the face and eyelids, but no eruption.

Dr. E. L. Morgan had often seen urticaria result from the use of sulphate of cinchonidia and quinine, and also from copabia. As an effect of the use of antipyrine and sulphonal, cases of eruption have been reported having a resemblance to scarlatina, rubeola, urticaria, and herpetic troubles. A case has been reported in which there was a hæmorrhagic exanthem after the administration of sulphonal. Englemann has seen scarlatinous eruption follow the administration of thirty grains of sulphonal.

Dr. F. Sohon related a case of idiosyncrasy as to the effect of quinine in a strong healthy woman, in whom a dose of two grains of the sulphate would produce a puffiness of the eyes and face, with a tingling sensation over the body, and great discomfort generally. He also related a case of peculiar susceptibility in the presence of buckwheat, where the contact or odor of cooking buckwheat would immediately cause an intense itching of the skin, which became the color of a boiled lobster, and the face was puffed to such an extent that the eyes were closed; there were at the same time lachrymation and persistent sneezing. He had also seen a case of urticaria produced by touching the honeysuckle leaf.

Dr. F. B. Bishop said that Dr. McGuire's paper gives us another link in the chain of evidence in an already established and proven fact in medicine; that is, the susceptibility of certain persons to certain drugs. These facts should make us use with care such drugs in susceptible patients, and in fact, all drugs in all cases—with whose peculiarities we are not familiar—most especially in the use of poisonous antiseptics—such as corrosive sublimate and carbolic acid after confinements. He thinks the case of bullæ and destruction of tissue referred to by Dr. McGuire as resulting from the use of iodide of ammonia, to be due to some paralyzing influence it exercised on the special vaso-motor centres.

Dr. W. P. C. Hazen reported a very marked case of rash from the administration of ten grains of sulphate of quinine, which exactly resembled that of scarlet fever, and on the tenth day the entire skin peeled. Although a child in the house sickened and died of scarlet fever, he held to his diagnosis of quinine eruption. Every spring and autumn

since, he has to administer quinine for his malarial condition, and on every occasion the characteristic eruption has appeared, followed by the same peeling of the skin. In another patient, a rash has appeared after taking the sulphate of cinchonidia.

Dr. J. W. Bovée reported one case—that of a woman to whom he gave the day she was delivered, pills composed of sulphate of quinine, nux vomica, and ergot. Each pill contained, he thought, two grains of the sulphate of quinine. Immediately after she took two pills intense itching of the skin occurred, which caused such restlessness as to prevent sleep. Next morning he noticed that her face, arms, and chest were covered with a fine eruption of a deep-red color, which she said always occurred after taking quinine; hence she had taken none during recent years. He could not concur in Dr. Bishop's fear of idiosyncrasy for corrosive sublimate; its use in surgery and obstetrics was far too beneficial and death-preventing to allow much importance to be attached to the infinitesimally small number of cases of idiosyncrasy as to its application.

Dr. J. Eliot has a phthisical patient in whom the one-hundredth of a grain of sulphate of atropia will cause, within ten minutes, a redness of the neck, which spreads to the face; the fever is at the same time increased; the increase may last for fifteen minutes, when it subsides; the sweating is checked, and there is then a subsidence of the fever.

Dr. McGuire, in closing, said that he had seen erythema caused by three grains of quinia given three times a day. The attending physician being in doubt as to the quinia causing the eruption, again administered it with the same results. He has a patient in whom antipyrin and antifebrin will cause an eruption, while phenacetine will not. He had seen a unique case in consultation. The patient's face was so puffed and swollen, as to have no resemblance to that of a human being; the eyes were completely closed, and the nose was not distinguishable. This condition had come about rapidly, and was then of one week's duration. There was no similarity to any known skin affection, and he could only ascribe it to iodide of potash which she had taken. He recommended the stoppage of the medication internally, and to use sedative applications. His diagnosis was not concurred in, but shortly after the husband said that within a week after stopping the iodide, she was almost well, but that he was still incredulous as to the cause, as he himself had often taken much larger doses with impunity.

To confirm the diagnosis, he was persuaded to give her five grains of the iodide three times a day; during the night her face itched, and in forty-eight hours, it was in a similar condition to that when first seen.

Dr. Johnson Eliot read a paper:

A Case of Poisoning by Cocaine. See page 947.

Discussion.—Dr. Llewellyn Eliot said that in 1880, Anrep discovered the anæsthetic properties of cocaine; his experiments upon animals, led him to recommend its use upon man; but to Koller, in 1884, was accorded the credit of its application, notwithstanding the article which Anrep had previously published. The speaker has never seen a fatal case of poisoning by cocaine, although he has seen its toxic effects. Some years ago he removed a large sebaceous cyst from the neck of our fellow member Dr. J. S. Harrison, using a four per cent. solution. The quantity used was three drachms, representing seven grains of the hydrochlorate of cocaine. The toxic effects soon appeared, and it was fully two hours and a half before the operation could be finished; during this time he gave a half pint of whiskey without effect. The first time he had used cocaine was in performing Emmet's operation for restoration of the perineum, and he fancied the healing of the wound was not as rapid or as satisfactory as it might have been, but in general surgery he had not noticed this action. It causes great swelling of the parts when used hypodermically, and in this way it will at times deceive us. He related a case where he thought he had amputated the glans penis, when he had not removed the entire prepuce, so great was the swelling and so large the organ. There is no cocaine habit. He had experimented upon himself with the fluid extract of coca, taking at first one drachm at night, increasing the amount to one ounce three times a day, allowing three-eighths of a grain of cocaine to the drachm of the fluid extract; this would mean three grains of pure cocaine three times a day. It requires an ever increasing dose. The after effects are terrible. Whiskey is not an antidote for it. Chloral and morphia are antagonistic to cocaine. He never uses a stronger solution in operative surgery than four per cent.

Dr. F. Schon said that two days ago he had occasion to aspirate the pleural cavity of a patient, with an atheromatous condition of the mitral and aortic valves, Bright's disease and general anasarca. Over the proposed site of the puncture, he injected ten minims of a four per cent. solu-

tion—less than half a grain. In less than half a minute, the patient showed such alarming symptoms of syncope, with a weak, fluttering action of the heart, and short, spasmodic breathing, that it was necessary to resort to the nitrite of amyl and postpone the contemplated operation. In using cocaine, in diseases of the throat and nose, he would caution against giving the patient the spray, to be used at home. Its results are effective, but it is enticing and captivating, and there is difficulty in making patients stop using it. In nasal surgery, he never uses a stronger than a four per cent. solution; in the larynx, in operative procedures, a stronger solution is sometimes required. He had frequently been annoyed by the toxic effects of the drug when operating upon the nose, notwithstanding great care is always exercised in its administration. Patients become nervous, pale, and faint. Not infrequently one is alarmed by the vertigo, with the fluttering heart, catching respiration, and cyanotic color of the face, even when fear can have no place in its causation. In clinics, he had seen the alarming effects of the injudicious use of cocaine; in two cases, life was held by the merest thread. To combat its effects, nitrite of amyl, whiskey, or bromo-caffeine, have been used according to the indications.

Dr. H. Reyburn said that he had frequently used cocaine as a local anæsthetic in cases of small tumors of the face, and other parts of the body. He had removed a large excrescence deforming the lower part of the nose, recently, without the patient suffering any appreciable pain. He had never used a stronger solution than one of four per cent., and did not think stronger solutions safe. He had assisted Dr. Hartigan to amputate an arm at the carpal articulation under cocaine. In this case, the patient was given two ounces of whiskey before using the cocaine, and he did not seem to suffer any great amount of pain. The cocaine was injected by means of a hypodermic syringe, in five minim doses; the injections were made at intervals of about one inch apart around the circumference of the limb. The solutions of cocaine we use are stronger than the terms four per cent. and ten per cent. would seem to imply, and hence we are apt to under-estimate their strength. A four per cent. solution of the muriate of cocaine contains about eighteen grains to the fluid ounce, and a ten per cent. solution contains about forty-five grains to the ounce. He employs a constricting band when possible on the proximal side of the point of injection.

Dr. S. H. Hill had frequently used cocaine in a twenty per cent. solution in operation on the cervix and perineum without any bad effect. He suggests, as a preventive of the unpleasant effects of cocaine, the use of whiskey previous to the injection of the cocaine, and thus avoid the prostration and syncope which frequently cause such anxiety.

Dr. J. W. Bovée believes most cases recover, but no one will say he is not exceedingly alarmed when the toxic symptoms of the drug present themselves. He said that Dr. Eliot has given a careful and concise history of this drug, and the Society should feel grateful, for the amount of time he must have expended in research is no small consideration. Dr. Bovée had done probably forty trachelorrhaphies with it, and had had no case of non-union—a condition to which it is said to predispose. He had also done a few perinorrhaphies, as well as various other minor gynæcological operations with it. Its usefulness in repairing the perineum in some cases was *nil*. Nervous women could not be sufficiently effected locally by it in many cases, thus making it unreliable.

Dr. J. Eliot, in closing, said that this is the only case of poisoning by cocaine he had seen in his practice—and he used cocaine very largely in nose and throat surgery—unless one occurred this evening. Having occasion to apply chromic acid to the pituitary membrane, he had used cocaine in a four per cent. solution; in a few moments, the patient complained of nausea, and vomited, but had no other symptoms, as he had not touched the pharynx. This may have been due to fear, and not to the cocaine. He never used a stronger solution than one of four per cent., and rarely gives it for home use, and then of a strength of one or two per cent.

Dioiburnia and Neurosine.

The doctors who have tested the samples of these preparations of the Dios Chemical Company, of St. Louis, recently left in their offices by Dr. Fuller, have found them to fully equal their respective claims. They represent often needed combinations. Look up the samples you pushed aside, and try them according to the indications named in the advertisement in this journal.

*Analyses, Selections, etc.***Pyoktannin (Blue) in the Treatment of Malignant Tumors.**

It does not seem that a sufficient clinical experience has been gained as to the therapeutic virtues of pyoktannin in malignant diseases to justify the summary manner in which some practitioners have pronounced it of negative value and laid it on the shelf. It is the well-known *methylanilin* used by microscopists as staining agent in bacteriological work. It is soluble in chloroform, in 50 parts of glycerin, in 12 parts of 90 per cent. alcohol, in 30 parts of boiling water, and readily so in 50 parts of hot water. A cold water solution can be made of any required strength up to a concentration of one part of pyoktannin in 75 parts of cold water; and this cold water solution is the one required for most purposes.

In Germany, it was first applied as a therapeutic agent. Locally applied to *sloughing ulcers of the cornea*, it interferes materially with the suppurative process, and greatly accelerates the separation of sloughs, and hastens healing. It exercises a wonderful healing effect when applied to the surface of *chronic indolent ulcers, whatever may be their origin*, causing ulcerated and discharging tumors to suppurate more freely for a time, after which, with some diminution in size, they cicatrize rapidly. Non-suppurating tumors—they do not degenerate, but simply shrink together in retrogressive metamorphosis.

Even when other antiseptics have been used without avail, applications of pyoktannin have caused *chronic purulent discharges* to cease altogether. As far back as early in 1890, Dr. Adolph Kessler, of New York city, extolled its virtues as "*the ideal antiseptic and pus destroyer*."

It appears to be a perfectly harmless or a non-toxic agent, its application giving no pain, and is extremely gratifying to the patient.

It may be applied by means of a pencil in bulk—the material being spread well over the entire diseased area. Or it may be used hypodermically—Prof. von Mosetig-Moorhof, of Vienna, having employed solutions of the strength of 1:1000, 1:500, and even 1:300, respectively.

In our June number, 1891, page 237, a synopsis of the experience up to that time of Prof. Mosetig with *pyoktannin in malignant neoplasms* is given—six cases: 1 of sarcoma of

inferior maxilla, 1 sarcoma of peritoneum, 1 cysto-sarcoma of sterno-clavicular joint, 2 carcinomata of cervical glands, and 1 papilloma of the urinary bladder; all were decidedly improved with possible absolute care in the near future. The injections varied in quantity at each sitting from 3 to 6 grammes of the solution. In one case 35 "sittings" were required.

Since Mosetig's observations two years ago, a great pile of clinical evidence of a case or two at a time have been reported by various practitioners—some recommending, and some saying it was of no service. The following translated therapeutic notes on the use of pyoktannin, in the Cincinnati *Lancet Clinic*, January 30th, 1892, very fairly represent the general character of recorded experiences up to date:

Dr. Camillo Lodigiani, of Parma, Italy (*La Riforma Medica*, No. 179, 1891), has used this antiseptic in the treatment of four cases of malignant growths as follows: 1. Man, age 52, peasant, sarcoma of the left upper maxilla; intra-parenchymatous injections of pyoktannin (1:300), given every two or three days, two grammes (thirty minims) of the solution. Growth of the tumor arrested for a few days. Patient tired of treatment, and went home. 2. Peasant, aged 36 years, epithelial ulcer of the lower eyelid and left cheek. Its growth was simply arrested (by local application of the solution). 3. Servant, 58 years old; recurrent ulcerating mammary epithelioma, the size of a two-cent piece. Of no influence, as the disease spread rapidly (local application of the solution). 4. Woman, 43 years of age; recurrent and ulcerating mammary epithelioma; injections of pyoktannin. The growth of the tumor was arrested, and has lost much of its malignancy. Neudorfer (*Ibid.*, p. 341, 1891,) obtained slight improvement in three mild cases of carcinoma (1 to 2 per cent. solution, or as a powder, 1 to 2 per cent. mixed with talc). Galezowski (*Ibid.*, page 341, 1891,) has cured, in three months. two cases of epithelioma of the eyelids (1 per cent. solution applied five or six times a day). Dr. Mario Bellotti (*Ibid.*, p. 339, 1881,) has treated two cases of epithelioma: 1. Extensive ulcerated epithelioma of the right upper jaw in a man of 56 years. Pyoktannin in solution (1 per cent.) and in collodion (1:30). Much improved in general condition. Margins of the ulcer less indurated, its base looks better, and its growth arrested. 2. Epithelioma of the lip in a peasant of 75 years. Growth arrested, and appearance of the ulcer improved. Willy Meyer (*Med. Record*, April 25, 1891,) has treated four cases of epithelioma

with benefit. Dr. Victor Bachmaier (*Wiener Med. Presse*), 1891, No. 36, also reports a favorable case.

Prof. H. J. Boldt (of the N. Y. Post Grad. Med. School and Hosp.,) gives the best paper on the subject (*Merck's Bulletin*, Jan., 1892), we have yet seen. He states most of the above facts, and adds much that we append. He reports four cases of malignant tumors of the uterus—all women, aged from 42 to 53 years. All had been bleeding, irregularly, more or less for periods varying from two to three months; during the intervening time offensive leucorrhœa was present, which was irritating to the genitals. The patients were emaciated, owing to the intense pelvic pain, principally in the sacral and lower lumbar regions—most marked at night, sometimes so severe that they could not sleep without frequently awakening. Their emaciation (very unusual in several successive cases) was due to loss of blood, leucorrhœa, loss of sleep, and pain. The two latter factors always play the most important part in bringing about that result.

The vaginal walls were infiltrated for from 1 to 4 centimetres [$\frac{2}{5}$ ths— $1\frac{3}{5}$ ths inches] downward from their attachment to the uterus; the anterior wall somewhat more extensively than the posterior. The vaginal portion of the cervix was nearly entirely destroyed by the neoplasm, the tissues breaking down readily under moderately forcible touch with the examining finger, and consequently freely bleeding. The parametria and the posterior folds of Douglas were extensively infiltrated; in one case the infiltration was so extensive, that the uterus was absolutely immovable under an anæsthetic, owing apparently to former para- and perimetritis; in the other three cases, there was slight mobility, but removal by extirpation could not be considered in any case.

Methods of Treatment.—Under the antiseptic precautions familiar to the modern surgeon, the patient should be thoroughly curetted, and all the diseased structure within the reach of the large, *sharp* curette removed; a small curette should not be used. After curetting, a tampon of dry iodoform gauze usually suffices to check bleeding. Only in one case was the Paquelin cautery used after the curetting, to check profuse hæmorrhage.

After forty-eight hours the gauze is removed, and a douche of bichloride of mercury 1:2000 used as a disinfectant. The external genitals are also washed off with the same strength of sublimate solution.

The patient being in *proper* Sims' position, with the respective speculum and a Hunter's depressor, both *brightly* polished and applied *correctly*, one can readily see the entire uterine cavity *after* the curetting. The parts must then be thoroughly dried with aseptic absorbent cotton. Now the needle, which must also be disinfected, is introduced. At the fundus uteri, the syringe having been filled with an aqueous solution of pyoktannin (blue) 1:1000, the needle is inserted from 0.5 centimetres [$\frac{1}{2}$ th inch] upward, even to its full length, according to circumstances; *i. e.*, the thickness of the respective part where the injection is made; while pushing the needle deeper the fluid is gradually pressed out by the piston, so that the deeper tissues are infiltrated with fresh staining fluid. One syringeful of pyoktannin solution answers for two or three punctures. Next, the liquid is injected into the parametria on either side, then the posterior vaginal wall—sometimes making as many as fifteen punctures at one sitting. Dr. Boldt begins the injection at the most distant part, because on withdrawing the needle some fluid returns through the needle puncture, and discolors the tissues immediately surrounding; so, were this to occur more proximally, the field for work would become so clouded that the injections could not be made with the requisite amount of precision. The liability of entering the peritoneal cavity to any extent with the needle can be prevented by judging the amount of resistance offered by the tissues through which the needle passes; but even if the peritoneal sac be reached, no harm would result if the rules regarding full asepsis are rigidly observed. Introduce the needle into the diseased vaginal structure in an oblique direction. After having completed the injections, pure pyoktannin powder is introduced into the uterine cavity by means of any suitable instrument—an ordinary suppository syringe will do—or absorbent cotton saturated with a 1:75 solution can be packed into the uterine cavity instead of using the dry powder. The syringe for the pyoktannin injections should be sufficiently long to reach any part of the tissues.

After the injections and introduction of the dry pyoktannin an ordinary cotton tampon and an occlusion pad are introduced to prevent the clothing becoming soiled. The tampon is removed the second day by means of the attached string; a douche of several quarts of warm water is then used, to rid the interior of the genital tract of pyoktannin as much as possible. The pyoktannin treatment is repeated every second day.

Regarding dosage, the treatment here advised is more heroic than that hitherto reported; but he has so far at no time noted any ill result.

Immediately after the injections, the patient usually experiences very intense pain; it, however, does not continue longer than from twenty to thirty minutes. Febrile reaction, or, in fact, any unpleasant symptoms have never followed.

In the beginning, the puncture-holes made by the needle in the raw cancerous structures, bleed quite freely, but soon this bleeding diminishes, until after the twelfth to fifteenth puncture, the bleeding will cease immediately after the needle-prick.

The raw cancerous tissue gradually develops a more healthy granular surface, and the infiltration in three of Dr. B.'s cases has slightly subsided; but *the cancer in none of these cases has developed any further*; besides, the analgesic properties have proved perfectly marvelous. After a few applications his patients experienced some relief, and after from fifteen to twenty, they are able to rest quietly during the night, with little or no inconvenience from the pain. On the whole, the results obtained are astonishing—knowing by former experience how rapidly these growths usually progress. He confidently hopes that by the proper treatment with this drug, we shall find a means to prolong life and alleviate suffering, and perhaps, in some cases, to produce a complete cure—which indeed have already been reported privately several times in cases of epithelioma.

Methylene blue was used internally, in doses as large as the patient could bear; *i. e.*, grm. 0.3 [gr. ivss.] *pro die*; but no material improvement was produced by this addition to the local treatment.

The dose of pyoktannin used hypodermically should not exceed 0.15 (gr. iisss.) in a $\frac{3}{4}$ to 1 per cent. solution; applied locally to the surface, it may be used *ad libitum*. This limitation has reference only to cancer of the uterus. If the hypodermic injections are to be in tissues covered by mucous membrane, as the infiltrated vaginal wall, it is not advisable to use the solutions stronger than 1:2000 lest, small abscesses form at the point of injection which for some days discharge blue-stained pus. The staining of tissues remains after an injection over ten days.

Dr. Hoge in the *Virginia Medical Monthly* for October, 1891, speaks of having used *six* pyoktannin injections in all: the first, 10 minims of a 1:300 solution, which was repeated

two weeks later; the next injection was made with a 1:200 solution, and finally 20 min. of a 1 per cent. solution was used. The case was reported as a complete failure. Dr. Hoge's failure to achieve a satisfactory result is not astonishing, since he used the remedy insufficiently.

Another explanation for unsatisfactory results might sometimes be found in instability of solutions. Solutions of pyoktannin, either alcoholic or aqueous, whether weak or strong will not keep long. Especially when exposed to light they decompose in a couple of days, without showing their decomposition by a marked change in color. Hence the solutions should be made *fresh every day*; and unless used at once, should be dispensed from a dark bottle.

Tuberculocidin ; or Prof. Kleb's Modification of Koch's Tuberculin.

Dr. Karl von Ruck, in charge of the Winyah Sanitarium for diseases of the lungs and throat, at Asheville, N. C., who has gained eminence as an authority in questions pertaining to the etiology, pathology, and methods of treatment of tubercular diseases especially, and who has well proven himself to be an observant, studious, and progressive practitioner with reference to the classes of diseases to which he is giving special attention, says (*Jour. Amer. Med. Asso.*, January 30th, 1892), he has received a supply of tuberculocidin from Prof. Klebs, who gives the following instructions as to its use and action: The beginning dose is from two to five milligrams, and increase rapidly up to one, and subsequently to two, four, six and eight centigrams. Hectic fever is no contra-indication; in fact, the temperature rapidly decreases and the local conditions improve. The preparation causes absolutely no fever in tubercular patients, and increasing fever when present is an indication for increasing doses. The remedy is given daily; when large doses are reached they are divided, half being given in the morning and the other half in the evening. The disintegration of the bacilli becomes manifest after five or ten of the larger doses have been given. Cough and expectoration diminish and disappear rapidly, and a gain in weight and strength soon follows.

From Prof. Klebs' statement it would appear that the tuberculocidin can be employed in cases where heretofore Koch's tuberculin was contra-indicated. The therapeutical effects claimed are identical with those heretofore discussed by Dr. von Ruck and others from Koch's preparation, ob-

tainable, however, with much smaller doses, of from one-tenth to five milligrams.

With the necessary care, Koch's tuberculin is entirely free from disagreeable symptoms, the same as Prof. Klebs' modification is claimed to be; and until the new substance can be produced so that the price, now \$1 to \$2.50 per average dose, is greatly reduced, there seems little need for its substitution, unless as an only and last resort in cases with high fever and otherwise very active and progressive disease. Even in such, Dr. von Ruck doubts the wisdom of so rapidly increased and large doses; and, in view of the experience of a year ago with Koch's remedy, which was then given in what we now know to have been overdoses, he cautions against the repetition of the same blunders. The impossible is not going to happen even from the employment of Kleb's tuberculocidin, and we must still hold fast to the principles of nutrition and climatic influences, or eventually realize disappointment.

In the meanwhile, a cautious trial of the modified substance would seem proper under every possible precaution. He trusts that Prof. Klebs may have led us one step further in the treatment of tuberculosis.

Anæsthesia in Gynæcology.

The chapter on this subject in Pozzi's great work on gynæcology, as translated by Dr. Wells, and now being issued by Messrs. Wm. Wood & Co., of New York, is a most practical one for general as well as special surgery. We make the following extract:

Many German laparotomists use a mixture of chloroform and alcohol; the anæsthesia is said to be more uniform, and vomiting less frequent. In France, chloroform reigns almost without a rival. Its purity should always be tested, especially if the anæsthesia is to be of long duration.

Under the same condition, and for particularly nervous and excitable patients, I have found it very advantageous to precede the administration of chloroform with a hypodermatic injection of one and a half centigram (twenty-five to thirty drops) of this solution:

Distilled water.....	10.00
Morphine hydrochlorate.....	10.00
Sulphate of atropine.....	0.005

This should be given fifteen or twenty minutes before the chloroform. The resulting unconsciousness is more regular

and of longer duration, although much less chloroform is required, and it also makes it easier to administer the anæsthetic with care. The process of mixed anæsthesia, which we owe to Dastre and Morat, can scarcely be awarded too much praise in operations of any considerable length. It is designed to avoid the symptoms due to chloroform—which the surgeon is unable to combat—laryngo-reflex syncope—especially secondary syncope. It prevents the initial excitement, diminishes nausea, limits the amount of chloroform used, and consequently lessens the chances of chloroform poison in operations of long duration. My learned friend, Professor Dastre, has assured me that in his laboratory experiments, before he adopted this method, he lost one out of every four dogs anæsthetized. For the past ten years (1879–1889), he has used it upon hundreds of animals, and has not lost one. Safety and convenience are both gained by this process. It has been adopted by practical surgeons. Aubert, head surgeon of the Antiquaille, in Lyons, uses it to the exclusion of all other methods, and testifies to its value in these words: “I know of nothing better nor more practicable. This method has the following advantages: 1. Safety. 2. More rapid induced unconsciousness. 3. Absolute calm on the part of the patient. 4. An easy awakening. 5. Very little malaise or vomiting as sequelæ. Many of my colleagues in Lyons, especially Professors Gayet and Leon Tripier, have at my instigation used this method of anæsthesia. The number of cases experimented upon (1887) amounts to several thousands, with no resulting accident.”

This mixture of morphine and chloroform was first used experimentally as an anæsthetic by Claude Bernard in 1864, and in surgery by Nusbaum. Further researches were carried on by Labbé and Guyon, Guilbert de Saint Briene, etc.

The combined use of chloral and chloroform was tried by by Forné (1874) and Dubois upon alcoholic patients. Trélat used the mixture in operations when the patient needed to be only slightly stupefied (4 to 9 grams of chloral hydrate, to 20 to 40 grams of the syrup of morphine of the codex, in 120 grams of water—taken in two doses at an interval of fifteen minutes.) Lastly, alcohol has been combined with chloroform and with ether (Dubois, 1876), more especially in alcoholic cases. The patient is anæsthetized in bed, and taken to the ampitheatre in a ward carriage, thus avoiding the disagreeable impression produced by the sight of the surgical preparations, and facilitating the first steps in the administration of chloroform.

Treatment of Incipient Phthisis Pulmonalis.

Dr. E. E. Fyke in his paper before the Marion county (Ill.) Medical Society last September (*St. Louis Clinique*), reported some cases, and remarks that an intractable cough, dyspnœa, and slight elevation of temperature, especially in one who presents a phthisical family is enough to establish the diagnosis of incipient phthisis—however vague and uncertain the physical signs may appear. He at once gives to adults a teaspoonful every four hours of the familiar “four chloride solution, to make which—

R—Hydrarg. bichlorid..... gr. j
 Liq. arsenic chlorid..... ℥ij
 Tinct. ferri chlorid... ..
 Acid hydrochloric. dilut. āā ℥ss
 Syr. limonis ℥ij
 Aquæ destillat. q. s..... ℥vj—Mix.

“Hydrolene” has given him more satisfactory results than any preparation of cod liver oil on the market, as it is easily digested and assimilated, and affords greater nourishment than other oils. He prefers the external exhibition of iodine for its counter-irritant effect.

How to Restore Health.

Whoever would perform efficiently the difficult task of nursing the sick, must first curb his belief in marvelous cures, in extra-ordinary means, and harken only unto the voice of reason; for what is necessary for the preservation of health is indispensable for the sick; and only he who exactly follows the best directions for general care of the health—always, of course, with modifications in various cases of sickness—can make pretensions of a noble fulfilment of duty.

Seven things are absolutely necessary to maintain or restore health: fresh air, light, warmth, rest, cleanliness, the correct selection and well-timed offering for food and drink. The lack of only one of these requisites may hinder the exercise of a physician's skill, and bring to naught both good-will and wisdom.—Hermine Welten, *The Chautauquan*, Feb., 1892.

Campho-Phenique for Ulcers, etc.

We are daily seeing records of cases in our exchanges which suggest that many practitioners are not yet sufficiently familiar with the use of this anæsthetic, antiseptic,

and reparative combination of camphor and carbolic acid. Dr. W. C. Wile, (*N. E. Med. Monthly*, Dec., 1861), reports a left lateral lithotomy, removing a stone from the bladder of a man 72 years old, weighing 917 grains, but a big gray slough covered the entire surface of the wound. He applied "campho phenique" entirely over the parts with a camel's hair pencil. In two days the slough separated; in two days more, granulations sprang up; and in four weeks the wound had healed by granulation. In a fat lady, aged 62, with varicose ulcer ($3\frac{1}{2} \times 3\frac{3}{4}$ inches) on leg, necrosis resulted, leaving a great big piece of slough in the middle. Except when asleep, the entire surface of the ulcer was painted every three hours with "campho-phenique." Within three days the edges of the slough became everted, and a day later the whole slough became detached. In six weeks the ulcer had healed by granulation.

Antipyrin and Quinine in Whooping Cough.

The unmistakable value of quinine in whooping cough, has long been established. Demuth, however, in 1886, demonstrated the greater value of antipyrin, since which time vast clinical experience has given it a rank high up in the list of remedies just short of that of a specific. Whether it acts as a germicide, or as a sedative, has not yet been definitely ascertained; but, according to Dr. E. Feer, of the Children's Hospital, Basle (*Med. Press and Circular*, Jan. 13th, 1892), the balance of evidence inclines to the hypothesis that its special benefit is chiefly due to its sedative action, since it has been recently proven (Dennue, Sée), that it has a direct restrictive influence upon the reflexes. Dr. Feer reports about eighty cases of whooping cough treated with antipyrin alone, in doses of as many decigrammes as the child was years of age, given morning and evening (or grns. xij to xv, for a child ten years of age), in powder administered in sweetened water. In four-fifths of the total number of cases, the beneficial effect of the remedy was established; in a few of these it was astonishingly marked. The attacks promptly diminished in violence and frequency, particularly at night. The remedy was well borne; vomiting was arrested, appetite increased, and the children generally became more cheerful and slept better; the course of the disease was decidedly shortened, and complications (broncho-pneumonia) were rare. In general, where several children of the same family had pertussis at the same time, the disease was more obstinate, and ran a more tedious

course. This is consistent with the opinion of Prof. Hazenbach, that children mutually re-infect one another under such conditions. In several instances, unmistakable relapse was evident when the administration of antipyrin was omitted. While the above applied to about 90 or 91 per cent. of cases, no improvement was observed in about 9 or 10 per cent.

[A combination of antipyrin and quinine acts better than either alone. "Tasteless syrup of quinine" or "febriline" as manufactured by the Paris Medicine Co., of St. Louis, has become a popular and an easy form in which to administer this latter drug to children. For a child about five years of age we have learned to rely quite confidently in uncomplicated cases on a mixture of about one or two grains of antipyrin in a teaspoonful of the above named syrup (equal to about two grains of sulphate of quinia) repeated two or three times daily.—*Editor*.]

Salicylic Acid in the Treatment of Certain Forms of Cystitis.

For years Dr. John P. Bryson, of St. Louis, Mo., (*Jour. Cut. and Genito-Urinary Dis.*, Feb., 1892), has used a two per cent. solution of salicylic acid in glycerin as an application to venereal ulcers. Lint soaked in this solution and applied to ulcers in patients not over-clean, keeps the lesion clean. It is used on chancres, chancroids, and herptic eruptions alike.

About three years ago a student by mistake mixed one ounce of this with five of water (making a one-twelfth per cent. solution), to wash out a bladder with chronic exudative cystitis; previously his bladder had been irrigated with the standard borax solution of glycerin and water, without material benefit. Throwing in through a soft catheter, one ounce of the salicylic acid solution, the returning fluid was much more milky in appearance than the urine previously drawn off. A second ounce thrown in, returned milky in color also. Becoming alarmed, the bladder was washed out with simple water and the catheter withdrawn. Next afternoon the patient returned much better—the call to urinate less frequent and less painful—and asked that a second similar injection be given, which was done. From this time a salicylic acid solution has been in common use in similar cases.

One can occasionally irrigate the bladder two or three times with simple distilled water until the fluid returns clear enough for inspection; after which, upon introduction

of the electro-cystoscope, it is clear that the thick, tough mucus has not been washed from the wall of the bladder, it being plainly visible over the surface or hanging in festoons, while the distending fluid remains sufficiently clear for inspection. He used a solution of sodium bi-carbonate to wash this muco-purulent solution off the vesical wall with only partial success. Finally he removed the cystoscope to wash out the bladder with a one-sixteenth per cent. of salicylic acid. The fluid, which had previously run clear, now returned milky, full of shreds. Clearing the bladder again with simple distilled water, the cystoscope revealed a clean bladder wall. The experiment led to the extensive use of salicylic acid solutions, or a combination of salicylic and boric acids (as in the Tiersch solution), in the treatment of cystitis either alone, or where necessary to cleanse the mucous membrane of adherent mucus and muco-pus in order to more correctly apply other remedies, such as nitrate of silver or thallin solutions. A very thin coating of muco-pus is sufficient to modify nitrate of silver solutions in ordinary strength so as to render it inert, either as an albuminate or as a chloride. Some surgeons attempt to remove this tenacious coating by the mechanical action of the injected stream—a method, which the use of the cystoscope has demonstrated to be impossible; moreover, one does not like to make use of a forcible stream, lest damage may result.

The great majority of cases of cystitis are by extension—a urethritis extending backwards sets up inflammation. Thus the disease is primarily a cystitis mucosa. A pathogenic agent, mycotic or chemical, acting upon the epithelial cells, determines not only an increased secretory activity, but also an active cell proliferation; so that among the first effects, are a piling up of epithelium and a coating of the surface with mucus. Leaving out of the question of increased vesical sensitiveness, one of the first effects of inflammation of the vesical mucous membrane is, to render itself to a greater or less extent inaccessible to topical applications; hence the custom to precede all such applications by irrigation. When the exudation is thin and made up chiefly of free pus, the solutions of borax, boracic acid, chloride of sodium, etc., adequately effect the purpose; but the more chronic the inflammation becomes, the deeper it sinks; and the more it determines cell proliferation and mucus secretion, the more useful becomes as a cleansing agent, the salicylic acid solutions. The addition of boric

acid, as in the Tiersch solution, is of no service. It is the salicylic acid, whose well-known power of dissolving epithelium, or epithelium cells, or what amounts to the same thing, loosening them up by dissolving the intermediate cement substance, that becomes a powerful agent in securing a proper condition for the application of other remedies.

It therefore goes without the saying, that salicylic acid is not of equal service in all cases of cystitis, and is distinctly contra indicated in some. In acute cystitis with thin exudation, it is not necessary. Where there is ulceration, with a disposition to bleed it is harmful. In tubercular disease, where the bacilli and their ptomaines are already breaking down the tissues without giving opportunity for other covering to an ulcer than that afforded by coagulation necrosis, salicylic acid is distinctly harmful. Its use in old prostatics with sacculated bladders into which numerous trabeculæ project, is open to two serious objections: First, for the cleansing of the pockets of the tenacious muco-pus it is inefficient; and second, the projecting edges of the trabeculæ are unequally exposed to its action, so that frequent irrigation will so clear them of their protective coating, and will in addition so soften and loosen their epithelial coverings, that they are apt to bleed. In proportion to the tendency to hæmorrhage, in no case is the use of salicylic acid solutions contra indicated. Some dilated, sacculated bladders, in the case of prostatic disease, are not capable of being emptied even with the catheter; some fluid will always remain behind. In such cases, great care is necessary in washing out, lest some of the acid remaining for a length of time in contact with exposed surfaces may, to too great an extent, dissolve off the epithelial coat.

With these precautions, it may be used with advantage in the bladder as follows: In exfoliative cystitis, where the cystoscope reveals the condition above described, three, four, or five washings of one-sixteenth to one-tenth per cent. of salicylic acid in glycerin and water may be made to clear off the mucous membrane. One or two introductions of an ounce or so of water should be then made to clear the bladder of the acid. The viscus, being then entirely empty, fifteen to thirty minims of a one or two per cent. silver solution may then be thrown into it by an Ultzmann's or a Guyon syringe. This may ordinarily be permitted to remain in the bladder, and does not cause much, in some cases, no pain. The urine trickling down, soon changes the nitrate into chloride, and beside a little burning and fre-

quency of urination, lasting for an hour or two, there are no disagreeable symptoms. Used in this way, the silver solution comes directly into contact with the cells whose action it is intended to modify. The full antiseptic astringents, or cell modifying influence, is thus obtained, and the mucous membrane is covered with a thin film of the aluminate of silver, instead of a thick, tenacious, and septic muco-purulent lining. If much pain, burning, or ardor-urinae result, it can be easily overcome, and the silver solution chemically modified by throwing into the bladder ten to fifteen minims of a ten per cent. solution of cocaine. Dr. B. never previously cocainizes a mucous membrane, for it cannot be washed off so thoroughly as to prevent its acting instantly upon the silver solution to change it into the inert chloride. In this way very much weaker solutions of nitrate of silver than those formerly in vogue may be used effectually in the treatment of chronic persistent cystitis. The strength of the salicylic acid solution is to be varied in proportion to the thickness, consistency, and tenacity of the muco-purulent covering. Where proliferated epithelium tends to assume the shape of a horny layer, the full strength of two per cent. salicylate acid in glycerin—a saturated solution in glycerin might be used—may remain in the bladder a few minutes, to be subsequently washed out with simple distilled water. In such a case it is preferable to withdraw so strong a solution through a catheter so that it should not come in contact with the urethral mucous membrane. Though salicylic acid is itself an antiseptic with certain bacterial powers, it has served best rather as a cleansing agent—one with which to prepare the mucous membrane—than as a curative remedy.

Of late Dr. B. has used with most satisfactory results, and with much less pain, than is the case with silver solution, *thallin sulphate*, whose effects it seems to extend below the mucous surface further than the silver. Whatever local application is used, the object is either to destroy the bacteria, to neutralize or render inert their ptomaines, to protect against the influence of a chemical irritant, or to modify cell action as to overcome their pathogenic effect.

As against phosphatic incrustations of the bladder wall, or parts of it, the salicylic acid solution is very much more efficient than these commonly in use, such as acetate of lead with acetic acid, potassium permanganate, amyl nitrate, except, of course, in cases of tubercular cystitis with

tendency to formation of secondary calculi, where an astringent is of more service.

Another useful field for the application of salicylic acid is afforded by the urethra. Surgeons accustomed to inspect the urethral wall through an endoscopic tube, observe occasionally urethræ which are not washed clean of adherent mucus and pus, even by the emptying of a full bladder. Even after free urination, small, grayish muco-purulent masses may be observed adhering to the mucous membrane about the mouths of the glands of Littre when in a state of inflammation. Sometimes it is not easy to wipe these off with a bit of cotton on the end of a probe. Mild carbolic acid solutions do not remove them, nor do mild sublimate solutions. To irrigate the urethra with, say a two and one-half per cent. carbolic acid solution, and then to tie an instrument into the bladder for drainage, will, in such cases, soon be followed by a muco-purulent discharge about the meatus and around the catheter.

To obviate this, irrigate the urethra with the salicylic and boric acid solutions. The extent to which the Tiersch solution will clean off the urethral mucous membrane is easily seen when one attempts, after such irrigation, to introduce a flexible India rubber catheter, lubricated with glycerin. The glycerin being wiped off, the instrument will adhere closely to the urethral wall; it will not advance, except by considerable force. The natural lubricant (urethral mucus) has been cleared off by the salicylic acid, and the mucous membrane adheres almost as if joined by a cement. By thus cleansing the urethra, Dr. B. has been enabled to drain the bladder through a catheter tied in, both in cases of cystic disease, as well as after surgical operations, or where fistulæ were to be healed. By thoroughly cleansing the bladder, the posterior and anterior urethra, by using thick borated glycerin as a lubricant, and by carefully looking after the cleanliness of the instrument, Dr. B. has been enabled to adequately and comfortably drain bladders which previously required a perineal button-hole. In two cases of prostatectomy by the supra-pubic route, the fistula closed after seven and twelve days' drainage "per urethram." In each case, the urethra, anterior and posterior, as well as the bladder, were first thoroughly washed with Tiersch's solution before the catheter was introduced. In neither case was it necessary to withdraw the instrument to clean it until the fistulæ had closed.

Etiology of Chancroid.

In a paper by Dr. R. W. Taylor, of New York city, (*Jour. Cut. and Gen.-Urin. Dis*, Feb., 1892), stated that it is to-day generally believed, that the chancroidal ulcer does not depend upon a specific virus of its own. While a chancroid very commonly is derived from a previous chancroid, a chancroidal bubo or a chancroidal lymphangitis, it also may originate in pus derived from irritated lesions of syphilis, and from irritated simple lesions in syphilitic subjects, and from various forms of simple pus, particularly when originating in active and intensely irritated lesions. De Luca and Ducrey have each claimed that they have isolated and cultivated a microbe which is the morbid agent in the production of chancroid, but their results are discordant, and they failed to establish a clear scientific claim. The general sentiment among those who study bacteriology is, that the chancroid is the production of pus which contains the staphylococcus pyogenes albus and aureus, and perhaps the streptococcus. Chancroid is produced by pus rich in pyogenic microbes, and it is not safe to say to a man suffering from chancroids that the woman he cohabited with undoubtedly had chancroids. Dr. Taylor then gave the history of a number of cases coming under his observation in which chancroids had been derived from simple purulent vaginal secretions, and others, in which the chancroids had originated *de novo*; that is, in which they were due to some unknown source of contamination of herpetic vesicles; of chafes; abrasions or fissures.

Dr. Morrow stated that it is generally admitted by all syphilographers at the present day, that chancroids may exceptionally originate from the pus of common inflammation, or from the pus of specific lesions that have been irritated, nevertheless he thought the general proposition holds good that in the immense majority of cases, a chancroid originates from a chancroid, or from a virulent ulcerating lymphangitis, or from a virulent bubo. The cases cited by Dr. Taylor, he did not consider conclusive. It is not uncommon to see lesions which in their contour and course greatly resemble chancroids; these, as has been suggested, may depend upon a pyogenic microbe and the proclivity of certain tissues to receive it. He felt disposed to doubt the fact that these lesions may develop into chancroids without contagion. Such ulcers may present the objective characters of chancroids, but he would not class them as chancroidal lesions. When we think of the immense possibilities of

exposure to pus in contact with women who have gonorrhœa or leucorrhœa, with perhaps some purulent exudation from the os uteri, and from balanitis, and the few cases of chancroid that can be traced to such exposure, the exceptions to the rule formulated by Fournier are so few that they may be disregarded. He thought Dr. Taylor had done a good service in bringing out the fact that chancroids may originate from common inflammations or from irritated specific lesions, but such cases were not nearly so common as the author meant to convey.

Dr. Brown considered Dr. Taylor's paper a very valuable one. Cases had come under his observation where lesions had developed from a herpetic source, and where it was very difficult to make a correct diagnosis.

Dr. Guiteras thought that the diagnosis was too frequently made from the appearance of the ulcer, and that typical chancroids in the male, come from typical chancroids in the female, and *vice versa*. Ulcerating herpetic lesions, especially in alcoholic individuals, often closely resemble chancroids.

Dr. Brewer stated that the subject of ulcerations about the genitals was still very obscure. He thought the term chancroid should be done away with entirely, and a generic name like septic ulcer, adopted for this class of lesions. Some of them are very virulent; others only moderately so.

Dr. Taylor, in closing the discussion, stated that he considered the chancroid a hybrid, heterogenous ulcer. Under the name of septic ulcer it might be received, although the name chancroid had become so deeply rooted that he did not feel like advocating its annihilation.

Phenacetine for Influenza.

At the meeting of the Medical Society of the county of New York, Jan. 25th, 1892, the discussion of influenza was opened by Dr. Janeway. After addresses by Drs. Jackson, Draper, and Robinson, Dr. Francis Delafield stated that the treatment consisted of putting the patient to bed, and seeing that he was well nursed and had proper diet while the disease was running its course. It was possible, however for the physician to interfere with advantage in the case of certain applications of all the remedies suggested for the treatment of influenza and its complications, such as severe headache or neuralgia pains, etc., he had found nothing so reliable as phenacetine, in doses of five grains every two

hours. The catarrhal throat trouble, which is often present, he had treated successfully with aconite, or salycilate of soda, with a solution of cocaine for local applications.

Book Notices.

Physicians' Leisure Library—1892. Issued Monthly. Annual price, \$2.50. Single copy, 30 cents. Large 12mo. Geo. S. Davis, Detroit, Mich., Publisher. (I) *Diseases of the Bladder and Prostate.* By HAL C. WYMAN, M. Sc., M. D., Professor of Surgery in Michigan College of Medicine and Surgery, etc. Pp. 132.—(II.) *Practical Resumé of Modern Methods Employed in the Treatment of Chronic Articular Ostitis of the Hip.* By CHARLES F. STILLMAN, M. Sc., M. D., Late Professor of Orthopædic Surgery, Chicago Polyclinic, etc. Pp. 118.—(III.) *Lessons in the Diagnosis and Treatment of Eye Diseases.* By CASEY A. WOOD, C. M., M. D., Professor of Ophthalmology in Post-Graduate Medical School, Chicago, etc.

For the benefit of those interested, we give above the titles of the three last monthly issues of 1891 of the "Physician's Leisure Library." The Publisher, Mr. Davis, is entitled to the thanks of the profession for presenting monthly such practically valuable monographs at so reasonable an expense. He has shown a thorough knowledge of the wants of the profession in the selection of subjects for the successive issues of the "Leisure Library," and in the choice of editors or authors so well suited to each subject.

History of Circumcision from the Earliest Times to the Present. *Moral and Physical Reasons for its Performance, with a History of Eunuchism, Hermaphroditism, etc., and of the Different Operations Practiced upon the Prepuce.* By P. C. REMONDINO, M. D., Vice President California State Medical Society, etc. Philadelphia and London: F. A. Davis, Publisher. 1891. Cloth. 12mo. Pp. 346. Price, cloth \$1.25, paper 50 cents.

The Introduction states that this book is the amplification of a paper read before the Southern California Medical Society in 1889. We say a great deal in stating that the genuine interest of this "History" is equal to the papers on much the same subject appearing in this journal some years ago, under titles like *Mutilations*, etc., by the late Dr. M. A. Rust. But this "No. 11 in the Physician's and Student's

Ready Reference Series" of the Publisher possesses specific interest to practitioners in that it gives detailed descriptions of the conditions calling for circumcision as well as the methods of performing it surgically as well as ritualistically. A recent school of neurologists denies the reflex character of convulsions. etc., as due to infantile prepuces; but unless such neurologists shut their eyes to facts recorded, they must again become convinced that circumcision has many a time prevented and many a time *cured* the child of convulsions. The only danger of such a book is that the impressible reader may imbibe too much enthusiasm, so as to lead him to attribute too much to non-circumcised prepuces.

Medical and Surgical Uses of Electricity. By GEO. M. BEARD, A. M., M. D., and A. D. ROCKWELL, A. M., M. D., formerly Professor of Electro-Therapeutics in New York Post-Graduate Medical School and Hospital, etc. *Eighth Edition. With over 200 Illustrations.* New York: Wm. Wood & Co. 1891. 8vo. Pp. 788.

Dr. Beard, named as one of the authors, has been dead about ten years; hence Dr. Rockwell is responsible for all the revisions since then. It will be found that, contrary to the great majority of surgeons, he is "a great believer" in the curative quality of electricity in many of the tumors and diseases for which the surgeon says nothing is good but the knife. A review of the facts presented would indicate that the enthusiasm of each party has led him to say a little too much in regard to certain points. This book records seven apparently consecutive cases of extra-uterine foetation in which the foetus was killed by electricity, and appeared to become encysted and then gradually absorbed—with entire disappearance of the enlargements in comparatively short periods and without after-bad effects or discomfort. But the laparotomist says this is all bosh, and that his is the only way to treat such conditions. Dr. Rockwell does well in simply recording the facts and leaving it to others to discuss their merits. It is unfortunate that this revision occurred just prior to the now popular cataphoretic method of using medicines. Dr. Rockwell speaks of only two medicines thus used—aconite and potassium iodide. Still the work, as a whole, is invaluable to student and practitioner, as all the principles and methods of use of electricity are fully detailed, and most valuable practical lessons are everywhere taught. The index is very good.

Complete Medical Pocket Formulary and Physicians' Vade-Mecum. *Collated for the Use of Practitioners.* By J C WILSON, A. M., M. D., Physician to German Hospital, etc. Philadelphia: J. B. Lippincott Co. 1892. Pages 262—8x3 $\frac{3}{4}$. Leather tuck and pocket. Price, \$2. (For sale by West, Johnston & Co., Richmond.)

This useful book to every practitioner contains "upwards of 2,500 prescriptions, collected from the practice of physicians and surgeons of experience, American and foreign, arranged for ready reference under an alphabetical list of diseases; also a special list of new drugs, with their dosage, solubilities, and therapeutic applications;" together with tables of formulæ for suppositories, hypodermic medication, of drugs for inhalation, poisons with their antidotes, a posological table; a list of incompatibilities; metric equivalents; a brief account of external antipyretics, disinfectants, medical thermometry, the urinary tests, and much other useful information required in emergencies, etc. Besides the 262 pages of text, it contains about 116 blank interleaved pages, on which the purchaser can add such notes of new drugs, combinations, etc., as he may wish. This detail of the contents is sufficient to make practitioners feel that "that is the very handy book they have long wanted."

Treatise on Gynæcology—Medical and Surgical. By S. POZZI, M. D., Professor Agrégé à la Faculté de Médecine. etc. *Translated from the French Edition under the Supervision of, and with Additions, by* BROOKS H. WELLS, M. D., Lecturer on Gynæcology, New York Polyclinic. etc. Vol. I. With 305 Wood Engravings, and 6 Full-page Plates in Colors. New York: Wm. Wood & Co. 1891. Large 8vo. Pp. 581—xxiii. Cloth. (From Publishers.)

We are sorry not to have the advertisement of this work before us. But judging Volume II, soon to be issued, by Volume I, we may very safely recommend this *Treatise* to practitioners as a most excellent one—rich enough in descriptive detail and illustrations to be a perfect guide in operations, etc., and complete enough in the scope of subjects considered to take the place of any existing standard work on gynæcology. The Translator has added many notes to represent the best of American practice. The subjects treated in Volume I are antisepsis, anæsthesia, control of hæmorrhage and closure of wounds, drains and tampons, examination of patient; metritis; fibroma of uterus; cancer of uterus; uterine displacements; deformities of the cervix, atresia, stenosis, atrophy, and hypertrophy; and disorders

of menstruation. The always interesting subject of general anæsthesia is so well discussed that we make use of a portion of the section on that subject in the department of Analyses, Selections, etc. In fact, it is hard to limit ourselves to this one extract—so many others on other subjects being of equal value. The work is most elegantly published, on excellent paper, etc. Of the 568 pages of text, about 60 are taken up in bibliographies. This seems an unnecessary loss of pages, since the numerous exhaustive Indices now published contain most of the references here given, and many more.

Manual of Physical Diagnosis for the Use of Students and Physicians. By JAMES TYSON, M. D., Professor of Clinical Medicine, University of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1891. Cloth. 12mo. Pp. 136. Price, \$1.25.

It is not so much new matter in this book that makes it so useful as that what it says is impressively well said. Years of practice as a teacher have made the author a master in the art. Like most other text-books on "physical diagnosis," this one limits itself almost entirely to diseases of the lungs and heart. The descriptions are made by words as well as it is possible so to describe sounds, murmurs, râles, etc. We hope the author will be sufficiently encouraged by the rapid sale of the present edition to start off soon on the preparation of a work of wider scope, taking in the abdomen, etc.

Hydriatic Treatment of Typhoid Fever. By CHR. SIHLER, M. D., Ph. D., Professor of Histology, Medical Department of Western Reserve University, etc. Published by Chr. Sihler, 832 Scranton Ave., Cleveland, O. 12mo. Pp. 340. Cloth, \$1 50.

The author writes with all the earnestness of strong conviction as to the special value of the cold-water treatment of typhoid fever. As to methods, etc., he adopts those pointed out by Brand, Tripiér and Bouveret, and Vogl. As to results, his statistics show a decrease of mortality in typhoid fever, where thorough hydrotherapy has been systematically used from about 25 per cent. under other plans of treatment to about 5 to 7 per cent. The treatment should begin early in the disease. The bath-tub should be in a few feet of the bed; the patient should step in, and lie down for 15 to 25 minutes at a time in the bath, at a temperature of from 70° to 72° with all of his body immersed, up to the chin; this

is to be repeated from 2 to 6 or 7 times in each 24 hours. The plan has numerous advocates in the Southern States—one of the most convincing papers we ever saw being one read some fifteen years ago before the North Carolina Medical Society during its session in Wilmington (we think) by the late Dr. Hines of that State. Undoubtedly the practice of the cold-water bath as a treatment of typhoid fever would become much more popular were it not for the great inconvenience of arranging the necessary details in private practice. We commend the book to every earnest student of the treatment of typhoid fever and allied diseases.

Botany—A Concise Manual for Students of Medical Science.

By ALEX. JOHNSTONE, F. G. S., Lecturer on Botany, School of Medicine, Edinburgh. With 164 Illustrations, and a Series of Floral Diagrams. New York: D. Appleton & Co. 1891. Cloth. 12mo. Pp. 290. (For sale by West, Johnston & Co., Richmond.)

The author introduces this as something almost unique in the way of a text-book. It does not profess to teach without the aid of a teacher. If properly used, it enables the student to better grasp the teachings of the teacher, and furnishes him sufficient data with which to intelligently review the lecture or the demonstration of the Professor. It is not, in the usual acceptation, an elementary work. But the excellent glossary appended well aids the student who adopts this as his guide-book. If used under the lectures of a teacher, this is an excellent text-book; but for the true beginner, it is too hard for him. It requires a certain amount of elementary botanical education.

Saunders' Pocket Medical Formulary, with an Appendix. By

WILLIAM M. POWELL, M. D., an Associate Editor of the "Annual of the Universal Medical Sciences," etc. Philadelphia: W. B. Saunders. 1891. Cloth. 12mo. Pp. 267+120 blank pages for Additional Formulæ. \$1.50 net. With Tucks, \$1.75 net.

This "Formulary" is arranged alphabetically as to diseases, under which headings 1,734 appropriate prescriptions—well-selected and carefully corrected—are given. Ready reference is made easy by a thumb index. In addition to the insertion of blank pages for additional formulæ, which the owner may wish to dot down, the *Appendix* contains a great many items of useful information, such as a posological table, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis

and foetal head, diet list of various diseases, obstetrical table, materials and drugs used in antiseptic surgery, etc. Such a work is always useful to the general practitioner as a ready reference reminder.

A Manual of Venereal Diseases. Being an Epitome of the Most Approved Treatment. By EVERETT M. CULVER, A. M., M. D., Pathologist and Assistant Surgeon, Manhattan Hospital of New York and JAMES R. HAYDEN, M. D., Chief of Clinic Venereal Department of Vanderbilt Clinic, College of Physicians and Surgeons, New York. In one 12mo. volume of 289 pages, with 35 illustrations. Cloth, \$1.75. Philadelphia: Lea Brothers & Co. 1891.

The excellence of this book consists in its unusual practical cast. Irrelevant questions are not discussed. The most advanced views and practices are concisely, and yet well enough stated to serve as the handy guide for the practitioner, and the reliable text-book for the student. The authors limit themselves to the *practical aspects* of the three venereal diseases—gonorrhœa, chancroid, and syphilis—in all their usual phases. For instance, about 75 pages are devoted to strictures as the result mostly of gonorrhœa. The authors hold positions which have given them abundant opportunities to see and treat the venereal diseases in all stages, and they have brought their combined experience and advice into the concise shape of expression seen in this *Manual*, which we most unqualifiedly recommend to practitioners and students.

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

Editorial.

Female Doctors and the Virginia Legislature.

Some weeks ago, a Bill passed the House of Delegates of Virginia, *requiring* that one of the staff of physicians of each of the insane asylums of the State shall be a female; but when the Bill came to the Senate, it was defeated by a large majority. During the agitation of the subject, many contradictory and amusing arguments were used in all seriousness in the newspapers, and in the halls of the General Assembly, *pro* and *con*. The legislative agitation of the question was altogether unnecessary; for there is no Virginia law which prevents woman from practicing medicine, provided she proves herself qualified before the Medical Examining Board of Virginia; nor does any law restrain her from holding a professional position in an asylum or other State institution, provided she is duly elected, etc. Indeed, in evidence of the unnecessary attempt at legislation, Dr. (Miss) Haynes did actually come before the Medical Examining Board of Virginia in 1890, passed a satisfactory examination along with the twenty odd men who were successful, was granted the formal Permit for license to practice anywhere in the Commonwealth, was elected by the Board of Directors of the Western Lunatic Asylum at Staunton, Va., as one of the Assistant Physicians, which position she accepted and still retains, and so far as we know or believe, has proven herself to be a qualified and an efficient physician. So there is law enough on the subject for those who favored the main proposition of the Bill.

As for the extremist who opposed the Bill on the ground that their sense of propriety was shocked, and could not tolerate the idea that woman, "who is but little lower than the angels," etc., should ever become a "female doctor in Virginia;" who held that a lady was not made for professional work; that to admit her to competition with men, would impair her moral influence, lower her social scale, etc.,—it is singular that not one of the opponents to her coming upon the medical field, ever suggested the uprooting of the seed already sprouting in Virginia soil. The lawyers did differently with the bill before the Senate, which proposed that women be admitted to practice law before the Virginia Bar—they defeated it. But the opponents to the proposed female doctor's Bill got in a flurry, went into a pell-mell

scramble, misstating facts, presenting wrong addition tables, misquoted or misapplied Biblical sentences, etc., and apparently forgot that the only question presented for action was merely whether or not the law should say that one of the physicians at each of the State insane asylums *shall* be a female. They undertook no step looking to the *prohibition* of a female doctor in a Virginia institution, and thus female doctors are just as allowable in such positions now as heretofore.

In so far as the bill was intended as an assault upon the virtue or honor of reputable male physicians, it is to be re-sented with indignation. It is just as resonable to arraign all of the priesthood for immorality because of the downfall of one here and there, as to make the sweeping accusation implied in the Bill that was proposed for the protection of innocent virtue. When it becomes the intention of a minority to displace an official at all hazards, it is the weakness of a depraved nature to attempt to distort the possible, so as to make the accusation appear probable. In the rare instances, however, where advantage is really taken of the insane to gratify the sensuous, then should justice truly be meted out to the offender, as to him who commits a rape.

But leaving aside this revolting suggestion, of course we have no sympathy with the idea of compelling the election of one or another doctor simply because male or female. Some women have unquestionably shown themselves competent and efficient as physicians, and have won laudable eminence in medicine. If, as seems demonstrated, woman has become *the best of trained nurses*, and shown herself equal to the occasion in times of emergency, as in cases of accident, the sudden gush of hæmorrhage, etc., requiring composure of manner, quickness of recognition, coolness of judgment, steadiness of hand, knowledge of the uses of medicines, surgical appliances, etc., and ability to aptly apply them in moments of ordeal, then surely it will be conceded that it is not improbable that she may become the equal of at least the average run of male practitioners. But in face of the demonstrated ability and efficiency of women as doctors all through the North and West—many of whom already are Southerners—it does not need argument to point to the possibilities and probabilities in the case. These things now stand as indisputably proven. So that to *argue* further in this direction, is to do like the fellow who takes a stand by the side of an electric car track to discuss whether or

not the motor can move the car, while in fact, with "no pullee and no pushee, it is going like hellee all the samee."

In the United States, there are now eight distinctive graduating medical colleges for women alone. Two of them are already well established in the South (Baltimore and Atlanta), with regularly increasing classes. The Woman's Medical College of Cincinnati is also graduating increasing numbers from South of that city. In addition to the above, there are 47 medical colleges for *both sexes*. In short, in round figures, 500 female graduates in medicine are being turned out annually from the colleges. A large number are from the South, and naturally many will cast their lots in Southern communities. It is idle to attempt to resist the logic of facts. In a few more years, *female doctors* will cease to be curiosities in the South. In the meantime, it will be well for the prudish to begin now to make up his mind what he will do in the event of his being called in consultation by one of these ladies. As for the vast majority of the observant and conservative element of the profession, they will receive the properly qualified female doctor in each instance as she comes.

Bicycles for Doctors' Use.

Bicycles have become so generally adopted by business men and others, that the riders are no longer unpleasantly conspicuous as they pass along the streets of our cities, towns, and villages. Throughout the North and West, they have become extensively adopted by medical practitioners as a means of locomotion in making their daily rounds. Why Southern doctors have not more generally adopted them we do not know—unless it be to their unfortunate, yet proverbial slowness in introducing an innovation upon an ancient custom. Of course bicycles are not serviceable where routes are only up and down mountain sides, through thickets and plowed fields; nor can they be used in roads where buggy wheels sink to their hubs in mire and mud, or where horses become mired to their bodies or knees. Yet public demands and the political interests of aspirants for county or legislative honors, are fast doing away with such almost impassable highways, and are substituting therefor macadamized, level, and solid-bed roads. At all events, during the late spring, summer and fall, when the horse is needed on the farm for plow or wagon, even the muddy roads dry off, and become smooth and solid; and then the utility and economy of the doctor's bicycle on which to

make his professional visits become demonstrable. In cities and towns with paved streets and avenues, of course their utility, convenience and economy are apparent. From an economical point of view, a good "Safety" is much more than fifty per cent. cheaper than a very ordinary saddle horse, with his equipments, shoeing, stable expenses, etc., during the year of purchase, while during subsequent years until a new "cycle" or a new horse is needed, the expense of the former is practically nothing. If practice is so extensive as ordinarily to demand the use of two such horses, the bicycle can take the place of one. Its convenience is shown by its constant readiness for use—as well to respond to the hurried midnight call at the other end of the town or city, after the stable is locked, the hostler gone to his home for the night, and the street cars have stopped, as during the day when the horse is tired or at the blacksmith's shop, etc. It is true that the indolent man, fixed in his habits and muscles, or the aged doctor who requires a buggy or carriage because of physical infirmities, cannot use the bicycle. But the younger, able bodied, *busy* practitioner who may adopt it, will find it useful, convenient, and economical, and oftentimes an enjoyable change from the horse or buggy.

We have not written this note at the request, suggestion, or even with the knowledge of any one connected with the Hartford Cycle Company. But as that company furnishes a most excellent "Safety"—equal to the very best—at a moderate cost as compared with the prices of other manufacturers, well adapted to the uses of the doctor who has a growing or extensive general practice in his community, we would ask any interested reader to refer to their page advertisement in this journal, in connection with the note on the subject in general.

Treatment of Goitre.

In a recent note from Dr. W. S. Cline, of Woodstock, Va., he states that he has "been surprised just twenty-two times in the cure of goitre." He "used tincture of iodine externally, and elixir corydalis compound, with five grains of iodide of potash internally," three times daily. "Seven of the cases live within seven miles of this place" (Woodstock, Va.). It is to be regretted that the Doctor does not give a fuller description of his cases; for the record he makes above indicates an exceptional success in what is generally considered a usually intractable disease.

The Law Regulating the Practice of Medicine and Surgery in Virginia—Amendments Secured.

The Committee appointed by the Medical Society of Virginia to co-operate with the Legislative Committee of the Medical Examining Board, in petitioning the Legislature to amend the law regulating the practice of medicine and surgery in Virginia, merits the profound thanks of the profession and people for its active and efficient work. In less than ten days after the bill amending the law was introduced in the Senate by its able patron, Dr. Southall, of Amelia county, it had been considered by two committees, had passed the Senate and House without a dissenting voice, was approved by the Governor, and became a law.

The readiness with which the legislators complied with the request of the profession shows a deep interest in the mission and confidence in the work of its State Medical Examining Board. As a rule, legislators voice the opinion of their constituents, and there is much satisfaction in knowing that the masses, as indicated by the action of their representatives, lend a ready ear and are guided in such matters by the medical profession. Nor is this the only evidence plainly indicating that the effort to elevate the standard of graduation and the tone of the profession generally by divorcing the teaching from the licensing power is being appreciated as an advance in the right direction.

The amendments just secured strengthen our law by the addition of three provisions. One of them was simply to correct a mistake of the Revisors of the Code. When our law was first enacted, it provided that all applicants for license should first stand an examination and secure the *Permit* of the Board except those who had practiced *in this State* prior to January 1st, 1885. The Revisors left out the words defining that the applicant must have practiced *in this State* prior to January 1st, 1885, and the amendment, just made a law, re-enacts the provision that all applicants must stand the examination except those who began practice "*in this State*" prior to January 1st, 1885.

The other changes read (*verbatim*):—"And provided further, that when, in the opinion of the President of the Board, any applicant has been prevented, by good cause, from appearing before the Board, he shall appoint a committee of three members, who shall examine such applicant, and may grant him a certificate, which shall have the same force and effect as though granted him by the full Board until the applicant shall have an opportunity to ap-

appear before the said Board, when, if the applicant fails to appear for examination, the President of the Board shall have authority to revoke said certificate, or in any case the President shall have authority, at his discretion, to grant a special permit to any applicant to practice medicine until he shall have an opportunity to appear before the Board in session for examination, which shall be revoked at the discretion of the President. The said Board shall have, in their discretion, authority to accept, in lieu of examination of an applicant, a certificate from the Medical Board of any other State, showing that said applicant has passed a satisfactory examination as to his proficiency, and obtained a license from said Board to practice medicine and surgery in said State."

Polyclinic and Post-Graduate Courses of Instruction.

Scarcely a day passes that does not present striking proof of the special value of the post-graduate and polyclinic courses of instruction which have been introduced in this country in the past few years. No practitioner is so eminent, nor one who proposes to keep up with advances too old to take such courses in the special department of medicine or surgery in which he is most interested. Nor is there need any more of "going abroad" to receive the highest touches of practical instruction, since, in almost every department, the American practitioner is entitled to the honor of making the most important advances. The New York Post Graduate Medical School and Hospital, the Philadelphia Polyclinic, and the New Orleans Polyclinic—each with its corps of eminent practitioners and authors—are fully equal to supply every demand of the times. We have never seen a practitioner return from the practical course of instruction of either of these institutions who was not loud in its praise, and presented evidence of the most decided nature of the benefit derived. As far as possible, it well repays any practitioner to take a polyclinic or post graduate course once in eight or ten years. Especially is this valuable advice to the country doctor who rarely has an opportunity to attend his local Societies, or meet with educated practitioners, and who has no hospital advantages for observation, etc. Of course no one who wishes to branch off into a special field of practice should think of so announcing himself until he has prepared himself by taking advantage of a special course in such a worthy institution as either of those just named.

Dr. Benj. F. Iden, of Manassas, Va.,

Should receive the thanks of the people and profession of Virginia for the trouble he has taken, much of it at his own expense, in having a "cancer quack" arrested and punished by court for practicing illegally in his section. This quack was shown to be without an enviable reputation at his former home in Cayuga county, N. Y., and he certainly demonstrates himself to be without education or scientific attainment in Virginia. And yet this man—scarcely able even to write a legible grammatical sentence of his own composition, after his punishment by the county court, had the audacity to appeal to the Legislature of Virginia, now in session, for the enactment of a Bill to exempt him from examination by the Medical Examining Board of Virginia, in order that he might continue in his practice of quackery. If Dr. Iden had not kept himself on the watch, the probability is that this locally notorious man would have imposed his claims sufficiently plausibly upon the Legislative Committee (on which there is not a single physician), to have secured the recommendation by the Committee that the Bill should pass. But Dr. Iden himself came down, armed with sufficient evidence to "show up" this "cancer quack;" and with the personal assistance of some of the doctors, citizens of this city, secured the defeat of the proposition to recommend the Bill for adoption. Dr. Iden's activity in this case led some of the Richmond doctors to overhaul some of the bills presented from other counties; and another petition was found from a Southwestern county already before another Committee of the Legislature, likewise praying for a Bill to exempt some one out there from the operations of the Medical Examining Board law. Of course there is no difficulty before an intelligent, truly representative Legislative Committee to defeat any such proposition. But unless the people and the doctors are ever on the watch for the "still-hunt" form of intrusion of such petitions, or unless they are constantly cautioning their legislators to be on their guard about such concealed petitions, it is possible some bill *apparently* of purely personal interest may slip through the sifters of the Legislative Committees. What peculiarly absurd notions some persons must have about the arts and sciences in general, and medicine in particular, that any man of intelligent ability in other fields of usefulness could have been found in this State to become the "patron" of a Bill, such as was presented in this Lilly case before the General Assembly!

The Armand Lunacy Case.

A curious case of lunacy has recently been brought before the Police Courts of New York City. Louis Armand, a teacher of French, was engaged some years ago to instruct Mrs. Charles B. Alexander, who, before her marriage, was Miss Hannah Crocker, daughter of the California millionaire. He fell violently in love with her, and his passion turned his head. He followed Mrs. Alexander to San Francisco, where his attentions became so annoying that he was arrested, but was released soon afterwards on his promise to do better. He returned to New York, and when Mrs. Alexander also returned, he began to write letters to her and to stay about her house all day in the hope of seeing her. So unpleasant did his actions become that he was arrested again, and a commission having decided that he was insane, he was sent to the Insane Asylum on Ward's Island.

Some friends of Armand then interested themselves in his case, and, on a writ of *habeas corpus*, he was brought from the Asylum, and the question of his sanity submitted to a jury for decision. Armand conducted his own defence, and exhibited such intelligence and skill that the jury decided in his favor and set him free. He promised not to annoy Mrs. Alexander again, but about two months ago began to write letters to her, and to speak to her when she was entering or leaving her home. At last, the police were appealed to again, and Armand was arrested. A letter was found in his pocket addressed to her, in which he raved incoherently about his love, and said that Mrs. Alexander was divorced, and that Inspector Byrnes and the police were the ones that were trying to keep them apart. There will be a further examination as to his sanity, and no doubt he will be returned to the Insane Asylum. It is difficult to believe that a jury would again find him sane unless there should be a decided change in his behavior.

Dr. George Tully Vaughan,

Past Assistant Surgeon, U. S. Marine Hospital Service, until now stationed in Evansville, Ind., where he greatly improved the Service and won many friends, has been selected as Assistant to Surgeon-General Wyman, and will at once move to Washington, D. C. This is a deserved rapid promotion of one of the most capable officers of the Service—having entered it only in 1887. From about 1880 to 1887, he was in private practice in Farmville, Va., during which time he joined the Medical Society of Virginia, of which he is an active Fellow.

The System of Practical Therapeutics,

Edited by Dr. Hobart Emory Hare, of Philadelphia, is to be a much more important publication than the incomplete notice given of the first volume in our January number. It will form three large octavo volumes of about 1,000 pages each, with 170 illustrations, written by 78 eminent authorities in their respective specialties—American and foreign. As it will be fully up to day, it will include all the uses of all the latest tried remedies. In just anticipation of a liberal demand for this *System*, which practically supplements and completes *Pepper's System of Medicine*, the Publishers, Messrs. Lea Brothers & Co., of Philadelphia, have fixed remarkably low prices *per volume*, payable on delivery of each volume, as follows: Cloth, \$5; leather, \$6; half Russia, \$7. This compels them to sell the *System* (\$15, \$18, \$21, respectively, according to binding.) *exclusively by subscription*, for the complete work. Vol. I is just issued; Vol. II will be ready Feb. 15; and Vol. III will come from the press by the middle of May. Each volume is copiously indexed, while a general index to the entire work will be appended to Vol. III. The work will be indispensable to practitioners.

Membership in the American Pharmaceutical Association

Is obtained only by election at the annual meeting. "Every pharmacist and druggist of good moral and professional standing, whether in business on his own account, retired from business, or employed by another, and those teachers of pharmacy, chemistry, and botany, who may be especially interested in pharmacy and materia medica," are eligible for membership. For blank application and further information, address Dr. H. M. Whelpley, 2729 Washington avenue, St. Louis, Mo., Chairman of the Committee on Membership.

Dr. Chas. G. Cannaday, of Roanoke, Va.,

Is visiting the Hospitals, and taking some special courses of instruction under the great European Masters in Medicine, etc. He left home about December 1st, 1891, to be absent several months. As an active Fellow of the Medical Society of Virginia, he bears letters of introduction which at once places him in relationship with the very best of practitioners and instructors that can be found in England and on the Continent.

Lawsuits Against Dr. Keeley.

The celebrated Keeley method of treating drunkenness must have some annoying drawbacks, as lawsuits seem to be multiplying about its originator. In one case, a prominent Chicago physician has brought suit because his name was inserted as a reformed drunkard in a long list of patients of the Dwight Institute, while he says he never was a patient at all, and is a temperance man. In another case, a patient has brought a damage suit because he claims the treatment has injured him physically without accomplishing the result claimed. At the same time, it must be remembered that there are hundreds and thousands who have been treated, and who believe that they are absolutely free from the danger of a relapse. If Dr. Keeley would inform the world exactly what his nostrum is, he would relieve himself of the suspicion of keeping silence simply because it is more profitable for him to do so.

"Vinolia" Soap, Emolient Cream, etc.

Every day's observation brings to attention cases of diseases of the skin, many of which could be averted or cured by the use of a properly made soap. Messrs. Blondeau et Cie, of New York, N. Y., are the proprietors of a neutral soap, free from sugar and chemicals, but extra cream, which is an excellent help in the prevention or cure of skin diseases. The "Vinolia" emolient cream is precisely what is needed in every dressing-room for application to abrasions, skin sores, etc. These "Vinolia" preparations, in short, should become generally adopted by the people as well as the profession. The delicate perfume given to each article of their manufacture gives a deciding preference for them over others *claiming* as much, but not establishing their claim.

Liability of Health Boards.

The liability of Boards of Health for acts which seem to trespass on private rights is an interesting and important question, and a recent decision in Florida states the law very clearly.* In 1888, a bark arrived at Pensacola, from Capetown, a port against which no quarantine had been ordered, but the Board of Health, by virtue of a general law giving quarantine powers, directed the detention of the vessel for twelve days, and required the discharge of ballast and fumigation. The owners objected to this, and submit-

ted, and brought suit for damages against the Board of Health. The court did not discuss the question of the propriety of the detention, but assumed that it was done in the exercise of a reasonable discretion. The point for decision was whether the Board of Health could be liable at all, being a corporation established for the public good, and all its functions being public, not private. After a careful examination of all the precedents, the court decided that a suit would not lie against Boards of Health for such acts.

The Medical Examining Board of Virginia

Will hold its First Semi-Annual Session of 1892 in the Capitol Building, Richmond, Va., beginning at 9 P. M., on Tuesday, April 19th—the third Tuesday of that month. Examinations of candidates will begin punctually at 9 A. M., Wednesday, April 20th; hence candidates should report to the Secretary of the Board (who will be in the Hall of the House of Delegates) at 8:30 A. M., so as to attend to the preliminaries. For fuller notices, see March and April numbers of this journal. In the meantime, further information may be obtained by addressing the Secretary of the Board (Dr. Paulus A. Irving, Farmville, Va.), or the President (Dr. Hugh M. Taylor, Richmond, Va.).

Report of the New York Post-Graduate Hospital and the Babies' Wards.

The Seventh Annual Report, ending September 15, 1891, states that during the year more patients have been under treatment than any previous year—842 house and 13,007 Dispensary patients. The work of the Babies' Wards has a three-fold object: (1) Medical and Surgical Treatment of the little waifs sent from all parts of the City of New York; (2) Higher education of physicians in the treatment of children's diseases; (3) Training of nurses for sick children. Prof. A. M. Phelps is deservedly mentioned in highest praise for his orthopædic work. In the Woman's Ward, the most serious surgical operations are performed by eminent surgeons. The advantages to the nearly 500 physicians from all parts of this country and Canada cannot be too highly presented. Dr. D. B. St. Jno. Roosa, besides giving much of his valuable services to the College and Hospital, has proven his great interest in the good work by contributing a legacy of \$10,000. If sufficient encouragement is given, the Directors will greatly improve and enlarge their facilities at an early date.

The International Executive Committee of the Pan-American Medical Congress.

The Committee on Organization of the Pan-American Medical Congress, at its meeting at St. Louis last October, elected the following International Executive Committee: *The Argentine Republic*, Dr. Pedro Lagleyze, Buenos Ayres; *Bolivia*, Dr. Emelio Di Fomassi, La Paz; *Brazil*, Dr. Carlos Costa, Rio de Janeiro; *British North America*, Dr. Jas. F. W. Ross, Toronto; *British West Indies*, Dr. James A. De Wolf, Port of Spain; *Chili*, Dr. Moises Amaral, Santiago; *United States of Columbia*, Dr. P. M. Ibanez, Bogota; *Costa Rica*, Dr. Daniel Nunez, San José; *Ecuador*, Dr. Ricardo Cucalon, Guayquil; *Guatemala*, Dr. José Monteris, Guatemala Uneon; *Hayti*, Dr. D. Lamothe, Port au Prince; *Spanish Honduras*, Dr. George Bernhardt, Feguagalpar; *Mexico*, Dr. Tomás Noriega, City of Mexico; *Nicaragua*, Dr. J. I. Urteka, Grenada; *Peru*, Dr. J. Casamira Ulloa, Lima; *Salvador*, Dr. David J. Guzman, San Salvador; *Spanish West Indies*, Dr. Juan Santoz Fernandez, Havana; *United States*, Dr. A. Vander Veer, Albany, N. Y.; *Uruguay*, Dr. Jacinto De Leon, Montevideo; *Venezuela*, Dr. Elias Rodenguez, Caracas. Hiwaii, Paraguay, Santo Domingo, the Danish, Dutch, and French West Indies are not yet organized. Nominations of local officers have been received from a majority of all the members of the International Executive Committee and a number of the lists have been confirmed by the Committee on Organization. These will be announced as rapidly as acceptances are received. CHARLES A. L. REED, *Secretary General*. *Cincinnati*, January 1st, 1892.

Important New Works on Surgery and Practice.

The Publisher, Mr. W. B. Saunders, 913 Walnut Street, Philadelphia, announces, now in preparation. ready for delivery about June 1, 1892, for sale by subscription only—(I) An American Text-Book of Surgery, by Professors Keen, White, Burnett, Conner, Dennis, Park, Nancrede, Pilcher, Senn, Shepherd, Stimson, Thomson, and Warren, forming one handsome royal octavo volume of about 1,200 pages (10x7 inches), profusely illustrated with wood cuts in text, and chromo-lithographic plates—many of them engraved from original photographs and drawings, furnished by the authors. Price, cloth, \$7; sheep, \$8. (II) An American Text-Book of the Theory and Practice of Medicine, according to American Teachers. Edited by Wm. Pepper, M. D., LL. D. In two handsome royal octavo volumes of about 1,000 pages each, with illustrations to elucidate the text

wherever necessary. Price per volume, cloth, \$5; sheep, \$6; half Russia, \$7. Agents wanted.

International Medical Annual.

Mr. E. B. Treat, Publisher, New York, N. Y., has in press for early publication the 1892 "International Medical Annual," being the tenth yearly issue of this deservedly popular work. Its thirty-five editors are specialists in their respective departments, selected from the brightest and best American, English and French authors. It is the embodiment of what is worth preserving of the current medical journals of the world for the year, and will contain over 6,000 references to diseases and their remedies. The service rendered by the "Annual" cannot be over-estimated, as it is an absolute necessity to every physician who would keep abreast with the continuous progress of practical medical knowledge. This Index of New Remedies and Dictionary of New Treatment, epitomized in one ready reference volume, at the low price of \$2.75, make it a desirable investment for the busy practitioner, student, and chemist.

The Tennessee State Medical Society

Will hold its Annual Session for 1892 in Knoxville, beginning April 12th—the second Tuesday of that month. The Secretary, Dr. D. E. Nelson, of Chattanooga, Tenn., will furnish additional information on application. An excellent session is anticipated.

Obituary Record.

Dr. Harry Crumley,

Professor of Anatomy, and Diseases of the Brain and Nervous System, in the Chattanooga Medical College, died after a few days' illness with pneumonia at his home, January 24th, 1892, but his remains were taken to his former home in Columbus, Ohio, for interment, near which city he was born April 4th, 1859. He was educated at Dartmouth College, and graduated in medicine from the Columbus Medical College in 1882. He then served two years as Assistant Physician in the Dayton and the Columbus Insane Asylum. In 1885 he located in Chattanooga, Tenn., and soon gained practice and reputation. He married Miss Farrell in 1890, who survives him, and was the sole support of an idolizing mother. He was a member of the Episcopal Church.

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Original Communications.

ART. I.—Prolonged Lactation and Some of its Effects.*

By JOHN E. WALSH, M. D., of Washington, D. C.

I have chosen this subject for my paper to-night, not because I have anything new to offer, but, having had occasion to look into the subject a little, I am led to believe that not enough attention has been paid to it by writers.

The following case is not remarkable for any bad results, but is reported merely as a curiosity:

Case.—Georgia L., æt. 23; a bright, well-formed and well-nourished colored woman, was admitted to hospital January 27, 1891, suffering from intermittent fever. She complained of pain in her epigastrium and back, general weakness, and, at times, terrible headaches; had her first child about five and a half years ago, which she nursed for two years. Her breasts have not been dry since, and she has been accustomed to milk herself two or three times daily. About three years ago, she had an abscess of breast, which was opened, and got well; one year later, had a miscarriage, and suffered from dysmenorrhœa for some time after. At the present time, her menses occur regularly and without pain. Upon examination, her mammary glands were found very large and filled with milk, which could be expressed by the slightest pressure. She was given quinia sulphate and

* Read at a meeting of The Medical and Surgical Society of the District of Columbia, January 11th, 1892.

potas. bromid., which soon cured the fever. For the breasts, belladonna, turpentine, and strapping, were tried; but when the patient left the hospital, Feb. 21st, although the breasts were greatly reduced in size, the secretion had not entirely ceased.

In looking up the literature on the subject of prolonged lactation, I was surprised to find, first, that very little or nothing is said on the subject by most of the text-books on gynæcology and obstetrics; and, secondly, that those who have written consider it a very grave and serious affection.

In good health, a normal amount of lactation not only does not produce any bad results, but is natural; if prolonged, however, its effects are serious and lasting on body and mind, and upon both mother and child.

The cause of the long-continued lactation in the case mentioned is hard to find unless it be, that nursing the child for two years, and continuing to knead the breasts afterward, so modified the cells as to make them permanently secretory; and, by constant irritation, the glands were kept full of milk. By prolonged lactation is meant suckling for more than from nine to thirteen months.

As is well known, some women can nurse much longer than others without any deleterious effects.

The evil effects are more frequently seen in women of susceptible, weakly, and especially of strumous constitutions, whose minds have early and long been cultivated at the expense of their physical health, who live in confined and unhealthy places, and who, before marriage, suffered from chlorosis and had been weakened by hæmorrhages and leucorrhœal discharges. Some of the general symptoms, as given by Drs. Graily Hewitt and Samuel Ashwell, are a dragging, aching pain in the back and loins; often pain across the shoulders, and on top of the head or forehead; and great pallidity of skin.

A marked symptom is want of sleep; and, if sleeping, patient is awakened by frightful dreams. There is marked and great debility, and the expression of the face conveys an idea of intense bodily prostration. There is excitement

or depression of mind, with a proneness to hysteria. The pulse is quickened, muscular system weakened, and appetite destroyed. There is also constipation, giddiness, and impaired vision. In addition to these general symptoms, these victims very often suffer from more serious results.

As might be expected from the relation existing between the mammary glands and the sexual organs, the uterus is early affected.

The endometrium, as well as the muscular structures, partake of the general debility. There is metrorrhagia from relaxation of the capillaries and leucorrhœa. As a predisposing cause of inflammation in and about the uterus, undue lactation is acknowledged by several of the most prominent gynæcologists, though they do not explain how its effects are produced.

Lawson Tait says he is "persuaded that prolonged suckling is the cause of a large number of cases of sub-involution of the uterus:" and further, "in the majority of cases, one might almost say in ninety-nine out of every hundred, chronic endometritis is accompanied by and is directly due to sub-involution of the uterus after labor or miscarriage."

Skene mentions this as predisposing to endometritis, and reports a case of a lady who nursed her child eighteen months, and who, in consequence, suffered from cervical endometritis.

Thomas also mentions it as a cause of chronic cervical endometritis.

Marion Sims says: "We may have menorrhagia from super-lactation, but such cases are not common and not usually obstinate." He mentions eight cases where menorrhagia was due to this cause; the period of suckling varying from sixteen to twenty-four months.

None of these writers give any reasons or explain why the uterus is thus affected.

Dr. W. Japp Sinclair offers an explanation. He says: "During pregnancy, the breasts are undergoing a change to prepare them for the purposes of lactation. Immediately

after delivery, there is an acceleration of this process, which is completed generally in three or four days. Stimulation of the breast at this time exerts a powerful influence in causing contraction of the uterus. Menstruation is wholly, or almost wholly, suppressed during lactation, as is also ovulation. [This last is questionable.] Then if lactation is gradually stopped, re-evolution of the sexual function becomes gradually complete; but if lactation has been carried to excess, it is natural to expect that it has exerted a greater than normal influence on the sexual organs; and when lactation is suddenly stopped, it is reasonable to suppose that the final stage of evolution will be more rapid than usual, and attended by some unusual phenomenon. This is, by a law of reflex compensation, when the uterus is emptied, the breasts become suddenly engorged, and when lactation carried on to excess is stopped, the uterus is engorged, giving rise to symptoms that might call for treatment."

This is all very well, but does not explain why we have inflammation about the uterus while lactation is continuing, and is not suddenly stopped. Besides the uterus, other organs are affected.

Dr. William McKenzie, about 1854, was, I believe, the first English writer to call attention to its effect on the eye. He thus describes a case of retinitis due to this cause. He said: "The disease may affect one eye only, but more commonly both eyes suffer from it. There is an evident general irritation about the organs of vision. The eye-lids are somewhat swollen, and their edges red. The conjunctiva, and especially the palpebral portion of it, is affected with a catarrhal inflammation, generally slight, but sufficient to cause adhesion of the lids in the morning. There is often some degree of rheumatic scleritis with stinging pain in the eye-ball and orbital region. The redness of the conjunctiva or sclerotic is rarely very considerable. The external part of the disease is apt to assume the form of phlyctenular conjunctivitis; then there is intolerance of light; and

the cornea becoming involved, presents a small opaque deposition near its centre, which is apt to fall into a state of ulceration. The patient complains of *muscæ volitantes* and of such dimness of sight that even the large letters of a title page cannot be distinguished. The loss of vision often proceeds to the length of disqualifying the patient from knowing one person from another. The pupil is at first contracted, but after a while becomes somewhat dilated and sluggish, while the cornea and sclerotic are found to yield too readily to the pressure of the finger—one of the diagnostic marks of retinitis upon which most dependence may be placed. The pulse is small and rapid; the patient complains of debility and general ill health, and is somewhat emaciated. Want of appetite, derangement of the bowels, rigor, flushing of the face, headache, vertigo, a dragging feeling in the back, and a deficiency of milk, generally attend the disease.”

Dr. R. Taylor, in 1855, also points out the injury to the eye by a reduction of the vital powers, and the unhealthy state of the blood induced by this excessive drain on the system. He says the injury may extend from a slight impairment of vision, to a total loss of sight; from inflammation of the palpebral conjunctiva, with slight intolerance of light, to opacity of the cornea.

Dr. Ashwell also mentions functional amaurosis, accompanied by congestion of the conjunctiva as a frequent result.

The brain is also very seriously affected by this apparently trifling disease. Epilepsy is said to have been caused by it, by the drain on the system, just as loss of blood and deficiency in quantity and quality from any other cause produces this malady.

There is the “insanity of lactation,” described by Dr. John B. Tuke. “It is,” he said, “distinctly the result of an anæmic state of the system, and in a modified form is not unfrequently noticed among patients applying for advice in general hospitals. Nursing women present themselves, complaining of symptoms of hysteria, restlessness at night, and a vague feeling of apprehension. Over-action of the

heart, bronchocele and exophthalmia frequently are present. Anæmic bruits are heard on auscultation, and a morbid condition of the blood is detected on microscopic examination. These physical signs are frequently observed amongst those patients in whom insanity has been developed. The mental symptoms are either mania or melancholia. The latter is more frequent, and accompanied by delusions either of a suspicious character, or as to personal identity, hatred of children, husband or friends, and a strong suicidal tendency. It is seldom, however, profound. The mania is of an evanescent nature, violent while it lasts, but not associated with the obscenity observable in puerperal mania. In this form, the insanity of lactation is more rapidly amenable to treatment than when melancholia exists; but in both forms, when taken in time, the disease is readily curable."

There are several cases reported illustrating this. Dr. Tuke mentions two cases.

Dr. Hewitt reports the case of a lady suffering from menorrhagia, due to excessive lactation, whose mental derangement took the form of melancholia. In eight other cases reported by him, all presented the symptoms indicating the loss of vital power, though their symptoms had not progressed to the form of melancholia.

In the *Medical Times and Gazette*, London, 1843, Vol. VI, is mentioned a case of a woman suffering from melancholia dependent upon prolonged lactation.

Dr. Ashwell also reports two cases of insanity from this cause.

Of the effects upon the child, Dr. Edward Morton, in the *London Medical and Physical Journal*, about 1828 or 1829, says, "Several cases which I had previously witnessed, led me to believe some years ago, that inflammation of the brain or its membranes might be produced in children in consequence of their being suckled for an undue time." He reports twenty-two cases, which seem to lend truth to his statement. He held that this might take place in a child who had suckled an undue length of time, or in a child who suckled from a nurse who had been long delivered.

Dr. Kneeland reports the case of a lady whose flow of milk continued five years. Her child died at the age of two years of hydrocephalus, having nursed up to the time of his death. Though Dr. Kneeland, himself, does not claim that death was due to the habit of long nursing, perhaps, if Dr. Morton's theory is correct, it was.

Only a few days ago, I, myself, had a case of a child four years old, who had been weaned only about six months previous. It seemed to be a well nourished child, without any evidence of struma, yet he was unable to stand without support, nor could he speak more than one or two words, and those indistinctly. Is it possible this lack of physical and mental development was due to long suckling?

This, gentlemen, is the evidence I have been able to collect on this subject. Now the question is: Is prolonged lactation so dangerous an affection as the gentlemen quoted would have us suppose? If so, it has been very much neglected; and my object is to call your attention to it, so that in the future we may notice more particularly what are its effects, and correct them by suppressing lactation at the proper time.

924 *Pennsylvania Ave., S. E.*

Febriline, or Tasteless Syrup of Quinine.

Quinine Pills and Capsules are very insoluble, often being discharged undissolved.

Febriline, or Tasteless Syrup of Quinine, has been found to be just as reliable in all cases as the bitter sulphate of quinine, and physicians will find it to their interest to use it for adults, as well as children, in place of pills and capsules. It is as pleasant as lemon syrup, and will be retained by the most delicate stomach, having also the advantage of not producing the unpleasant head symptoms, of which so many patients complain, after taking the quinine sulphate. Possessing these advantages, physicians will find it superior to the quinine sulphate, for all cases requiring quinine—particularly typhoid fever patients.

ART. II.—**Medico-Legal Aspect of Intestinal Surgery.***

By JOHN D. S. DAVIS, M. D., of Birmingham, Ala.

The peculiarities of the laws of this country, and the position assumed by some of the less aggressive surgeons, and the assumed dogmatism of a few of the *legally competent* expert witnesses, in the condemnation of necessary authenticated and well recognized surgical procedures for the restoration of intestinal continuity, is a justifiable reason for the presentation of this subject for discussion.

Many physicians and surgeons who condemn all mechanical aids for intestinal repair, know not how to use them, and never saw them used, have been known to go in the witness box for purposes of condemnation and disapproval, when they knew nothing of intestinal surgery at all.

In case of death of the patient, the surgeon may be proceeded against civilly by an action for damages, and criminally by an indictment for manslaughter. A civil action is no bar to criminal, and the result of one will not prejudice that of the other.

To substantiate a charge of manslaughter, the defendant must have been guilty of criminal misconduct, arising either from ignorance or criminal intention in the failure to adopt the means settled by the most competent surgeons, and apply the skill with which, at least, a fair proportion of the surgeons of his own locality are endowed. One, or both, are necessary to establish that criminal negligence essential to make out a case of manslaughter. Gross neglect and ignorance, must be shown to secure a conviction. At common law, "if a physician or surgeon, or any person assuming to be such, by his gross negligence, or gross ignorance, or by his rashness or want of proper caution, causes the death of his patient, it is manslaughter."† At criminal law, "A person who, by an action of negligence or misconduct, in a business or employment in which he is engaged, or by any

* Read before the Southern Surgical and Gynæcological Association, in Richmond, Va., November 11th, 1891.

† Field's *Medico Legal Guide*.

unlawful negligence or reckless act, occasions the death of a human being, is guilty of manslaughter in the second degree."* The provisions of the criminal law are drawn from that of the common, and depends for its interpretation on that of the common law.

With the question of law, and the present lack of requirements for expert testimony clearly in our minds, there is no avoidance of the fact that every one of us is in the range of the enemy, with the mercy of the courts only for defence, and without a law in favor of redress.

In my own State, within the past year, two physicians, ex-army surgeons, who gave evidence that neither had ever done a laparotomy for any cause, and never saw one for gunshot or stab wound of the intestines, testified that a laparotomy, in a case of a penetrating gunshot wound, that produced death from intra-peritoneal hæmorrhage, was not justifiable, and caused the death of the patient.

The expert testimony in this case was given by the witnesses for the defendant, who was on trial for murder. The judge held that the experts were competent, and upon their testimony the jury was unable to determine as to who killed the man—the physician or the defendant—and decided for the defendant. The evidence in this case is sufficient, if yet presented to the grand jury, to secure an indictment of manslaughter against the operating surgeon.

In this day of specialties in medicine, but few general surgeons have the opportunity or disposition to qualify themselves as expert operators in intestinal surgery; but many—to the discredit of the profession—voluntarily appear in the criminal courts of the country pretending to be such. It is too often that physicians and surgeons weaken and invalidate their opinions to a greater or less degree by unscrupulous interest in behalf of those employing them, a fact cunningly turned to advantage for defendants in criminal prosecution, and for like reason may become dangerous to the operators they oppose and envy.

* The New York Penal Code. Section 195.

Owing to the advance so recently made in intestinal surgery, it will not be difficult to map out lines of safety in these necessary operations, so that the surgeon can be protected, the patient get the benefits an operation affords, and the criminal will not evade justice.

To do a laparotomy for a stab or gunshot wounds of the intestines inflicted by one with murderous intent, and be able to evade civil and criminal liability, the operator must—(1st) Be able to show evidence of ordinary surgical knowledge in the requirement of the special operation to be performed; (2nd.) He must possess ordinary surgical ability for doing the special operation to be performed; (3rd.) He must exercise ordinary prudence in performing the special operation to be done; (4th.) He must perform the special operation in an ordinary skillful manner.

Hence, to prevent confusion, it will be good, if possible, to determine what constitutes *ordinary* surgical knowledge, ability, prudence and skill. Upon these depend the whole medico-legal status of the intestinal surgeon, and upon which the expert should be required to depend also. According to the practices and rulings of courts in this country, the word *ordinary*, in its surgical adjectiveness, means that the surgeon shall be capable of, and exercise that surgical knowledge, ability, prudence, and skill with which a fair proportion of the surgeons of his given locality are endowed, and not that of the highest lights of his profession. Surgeons living remote from cities and hospitals, will not be expected to exercise that superior skill attained by those possessed of these superior advantages. What might be termed *ordinary* skill by some courts in Alabama, would be considered ignorance by a court in New York. To possess the requirements with which the best surgeons of a given locality are endowed, seems to be a clear interpretation of what the courts term "*ordinary*" in its surgical sense.

What I say about intestinal surgery is applicable to all cavity-surgery; and why I have selected this subject for discussion is, because of the fact that all established serious operations, have met with such opposition as to arouse the sus-

picion of the laity, and delay the advance in general application. In view of the mortality which has attended intestinal operations in the hands of the most competent surgeons, there is great need for a justifiable recognition on the part of the profession as to the necessity of certain procedures in intestinal surgery, and a rule applicable and fixed as to who is competent to do those operations, and what observations and experiences are necessary, as a rule, to attain competency in intestinal work.

Laparotomy for other indications has become an established procedure from which the laity does not shrink. And while the general history of laparotomy for other recognizable abdominal and intra pelvic operations may become the history for laparotomy for traumatic injuries to the intestines, in its medico-legal significance, there is a vast difference.

In the early history of laparotomy, only patients worn out by disease, and constantly subjected to greater danger by the pressure upon other abdominal viscera, were subjected to operations. Not until death stared the victim in the face would they resort to surgical aid. So great was the mortality of operations resorted to at such unfavorable times for surgical interference, that no one would seek surgical aid until all other means of relief failed; but as time passed, and the era of antiseptics and cleanliness came, so much better results attended surgical interference that patients suffering from abdominal tumors were encouraged to resort to surgical treatment before their physical strength had given way, and at a time when better results could be attained. The mortality in ovarian or pelvic surgery was never so great as that of intestinal surgery, for the reason that operation could and was always resorted to before the patient's health had been wasted by the disease, and before the parts involved in the operation had undergone irreparable changes. "The mortality of intestinal operations will always be great, because conditions which cause the obstruction are often an intrinsic source of danger;" and because of the great traumatism and peritonitis due to escape of intes-

tinal contents, giving rise to peritonitis, and frequent existing peritonitis from ruptured abscess, etc.

The necessity and authenticity of intestinal operations are established beyond a controversy, and have no part in this paper.

The real questions for discussion, then, are, Who should be considered competent to do these operations, and considered experts when called upon to testify as experts in cases involving questions, civil and criminal, relating to intestinal surgery? These are especially pertinent, in view of the fact that there is no recognized standard of attainment prerequisite to the title of doctor, and all are admitted to testify as experts in a range of cases involving questions of malpractice or suspected crimes in the whole range of medicine.

On account, then, of the necessity of a peculiar knowledge to be capable of properly and truthfully interpreting facts related by the testimony for hypothetical consideration, and its essential elements of value in relation to facts so observed by others, I am constrained to say that knowledge and ability for successful operations is all important for those who draw conclusions from a hypothetical case. A distinguished jurist said to me just before I left home: "Not until medical men are less influenced by popular sentiments and notions respecting the merits of any given case, upon which they may be called to testify, and become honest enough to say, 'I am not well enough informed to testify upon specialties about which I know nothing,' surgeons will ever stand in danger of mischief from meddling, dishonest medical men."

The egotistical contradiction, so often observed in the courts by medical men, have caused the courts and juries to hold in low estimation the testimony of medical men generally, and lessened its influence, to a great extent, in determining verdicts; and just this fact marks the testimony of the malicious, dangerous, and should be avoided; and, too, because so many of them are members of reputable medical societies: prominent in Church and State, and yet no better

than a detective tough, willing to swear to anything for money.

Until the courts demand and require evidence of accurate knowledge and operative ability sufficient to make a physician competent for surgical work in this specialty before allowing him to testify as an expert, surgeons located in the midst of jealous operators, devoid of consciences, must be exceedingly prudent, cautious, and conservative, and throw around themselves all the safeguards possible.

The test of cross-examination as to qualifications, in the absence of fixed and essential requirements as to knowledge and ability, can scarcely be relied on to expose false pretensions. This being the case, it requires no argument to convince us that the testimony of the most capable and experienced, informed by principles of accuracy and practical personal experience, might be easily vitiated and invalidated by the dishonest.

I do not think demands should yet be made upon legislative bodies to enact laws to stay the hand and close the mouth of the incompetent; that would be hurtful, at this time, and would accomplish nothing. But this body, if aroused to the proper appreciation of the subject, can do much to eliminate and stop this professional sin.

What, then, are the medico-legal requirements, essentials and necessities to become an intestinal surgeon—he who alone has the essential prerequisites and requirements for expert testimony and operative success? He must have had opportunities for observation and personal experimental work upon the living as well as upon the dead, and operated sufficiently, at least upon animals, to guarantee a reasonable amount of experimental aptitude, tact and instinct. Nothing less than many operations upon the living animal will secure that skilful instinct, tact and aptitude necessary for success. Some men will learn more, and derive more valuable successful experience in five operations than others in one hundred. No man should attempt an intestinal operation on man until he has had the personal operative ex-

perience of many successful operations on the dog, or some other living animal. In pelvic surgery, this does not hold. The conditions resulting from ectopic gestation can only be met and relieved first on woman, and, with few exceptions, a woman has been sacrificed from inexperience in the personal work of the majority of operators. There is no excuse for intestinal operations being so learned.

No man who has not been in the frequent habit of operating upon the pelvic or abdominal viscera should attempt an intestinal operation on man until he has had the experience which many given operations on living animals will afford; and then not until he has saved at least fifty per cent. of his cases in experimental operations.

The question, When and who should do and testify on intestinal surgery? is one of vital interest to the profession—a legal question of no doubtful issue, and a matter of the greatest concern to the people as well.

The study of the literature of intestinal surgery must convince every unprejudiced mind that the positive knowledge acquired by animal experimentation does not warrant its practicability in the hands of the inexperienced.

Exact and practicable information, skilful manipulation and reparation, are the reward and the result only of personal and individual demonstrative experimentation—the surgeon becoming proficient only through personal work in operating on living animals. And, too, I will emphasize that any claim of qualifications as an expert in the jurisprudence of intestinal surgery must be based upon the special knowledge derived from such experimental training.

To meet with success in cases of gunshot wounds we must operate promptly. The operation must be done quickly. If prolonged to two hours and a half, (often less time), the patient will die from exhaustion in five or six hours. There is nothing more important than to do these intestinal operations rapidly. No surgeon should go into the abdomen to make reparation for traumatic injuries without having a good supply of anastomotic devices necessary to repair the

bowel by anastomosis. I never think of going into the abdomen without having a good supply of my cat gut plates or mats with me. We cannot always be sure that their use may not be imperatively necessary. Beneficial experience can only be had by operating on the living animal tissues. Without such experience, no life is safe in the hands of the operator. Except in such rare emergency cases, where no experienced surgeon can be had to do the operation, the surgeon should receive no mercy at the courts for his desperate adventure—nor should he be spared by the kindly refuge of a too often fond, indulgent and trusting *clientele*.

The time has come for a consideration of this evil. The profession should be apprised of the danger of reckless, inexperienced abdominal operators. It should be a crime to make these intestinal operations previous to experimental work on living animals. I once saw my brother remove, in a few minutes, a parovarian cyst of large size in the presence of a very bright physician who dared to imitate him. The operation by my brother occupied but a few minutes. In the hands of the novice, the operation lasted one and one-half hours, and the patient died from exhaustion.

Another illustration comes to my mind. A physician of middle years—a noble man and a fine general surgeon—after seeing a rapid operation for the closing of four stab-wounds of the ileum, thought it easy enough, and killed his next patient with a one hour's search for a perforation which did not exist. He lacked that skill that comes of actual working experience. As good surgical aid could have been had in both the above cases, both operators deserve the severest condemnation.

A third surgeon, with ability and skill far in excess of the other two, refused to operate in a gunshot injury because, as he said, he could get a surgeon in whose hands the life of his patient was safer. That was pluck and true philanthropy. He was placed, by worthy and unselfish devotion, on the altar of human sacrifice in person, name, and deed. He did not fail to remember that a human life was

of paramount importance to his professional popularity. He understood his incapacities, and did not operate, just as he would not have testified if he had been put on the stand. He, as all physicians should be, was thoroughly imbued with the spirit of philanthropy, honesty, and integrity.

Let us engage in inaugurating a policy of candor and honesty for those to whom we vouchsafe surgical aid on the one hand; and, on the other, encourage a desire on the part of the profession to imitate the glorious example of putting duty before professional policy. And it will require no prophet's power to declare that the outcome of such a policy will be the saving of many lives and a protection to the profession.

ART. III.—Does the Moderate Daily Use of Alcohol Tend to Injure the Body and Brain?—A Consideration of the Physiological Action of Alcohol on the Human Race.

By **EDWARD C. MANN, M. D., F. R. S.** (London), of Brooklyn, N. Y.

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INTENDENT SUNNYSIDE SANITARIUM FOR NERVOUS

AND MENTAL DISEASES, INEBRIETY, AND

THE OPIUM HABIT.

I have chosen for consideration this afternoon what I deem to be one of the most important topics of the time—namely, a discussion as to whether the moderate daily use of alcohol tends to injure the body and brain. Is moderation in drinking true temperance? Does the moderate daily use of alcohol injure or impair normal cerebration? Does it injure the structure of the brain and impair its functional action? Does it result in altered conduct and loss of ability? Does it lower intelligence and morals? Does it bring down the brain-capacity to a lower level? Does it have a special effect upon nerve-centres? If so, does it not necessarily affect all thought and conscious action, as the brain

* An Address delivered February 2nd, 1892, before the New York Academy of Anthropology.

is the organ of thought? The great demand of the nineteenth century is for brain-ability and strength; and if we can show that the moderate daily use of alcoholic liquors lowers the intellectual level of the member of society who uses it, we think we enter a strong plea against its use as inimical to the safety and welfare of society. No brain-worker can do his or her best work if such person is a moderate drinker. It as surely kills out a man's high intellectual ability by incapacitating the organ of thought, as water puts out fire.

There is a disease which tends directly to the destruction of all physical, mental and moral health of individuals, communities, and nations, which preventive or State medicine has seemed thus far powerless to check—that widespread and universal disease, intemperance. We need more efficient and wiser legislation upon this subject; and although the Legislature undoubtedly has the right to interfere with the personal habits or private business of individuals, when these are productive of direct evil to the public, yet I think their wisdom and intelligence should be first directed in the channel of the diffusion among the masses of the knowledge of sanitary and hygienic laws relating to alcohol and the penalties consequent upon their violation. The public sentiment must be enlightened and changed before prohibitory laws and statutes will avail. When the masses can be made to understand that by intemperance they are not only destroying their own physical, moral and intellectual health, but that of their offspring, on whom this course is inevitably entailed by the laws of hereditary transmission, then, and only then, will the disease—for disease it is—be abated.

In all parts of the civilized world man seeks for some stimulus, and this tendency or appetite for stimulants varies with varying climatic law, with race, and the character of the stimulant used. In Africa, *lagmi*, made from the date-palm, is used; in Arabia, *eban*, made from milk, is used; in South Africa, *kaffa beer*, made from Indian corn, is used; in

South America, *chica* made from maize and spittle, is used ; in Abyssinia, *bonza*, made from millet, is used ; in China, *shamshoo*, made from rice, is used ; in Constantinople, *mastica*, which is rum flamed with mastica and brandy, is used ; in Dalmatia, *maraschine*, made from the macarska cherry, is used ; in Egypt, *araki*, made from dates, is used ; in the East Indies, *calla*, a sour wine made from the cocoanut palm, is used ; in East India, Ceylon, *arrack*, made from rice—the areca nut—is used ; in India, *bojah*, made from elusine corocana, and *murwa*, made from the same, is used, and in Ceylon, *toddy*, made from the cocoanut ; also the Indians use *maherrah arrack*, made from the flowers of the madhuca tree ; in the Islands of the Pacific, *karra* or *kara*, made from the macropiper (long pepper), is used ; in the Interior of Mexico, *mescal*, distilled from pulque, is used ; in Japan, *saké*, made from rice, is used ; in Kamschatka, *slatkaia trara*, made from sweet grass, is used ; in Mexico, *tepache*, made from pineapples, and *pulque*, made from the argrave or century plant, is used ; in Russia, *quass* or rye beer, made from rye and barley flour mixed, and *rodki*, made from potatoes, is used ; in the Sandwich Islands, *ywera*, made from tee-root, is used ; in Switzerland, *kirscheuwasser*, made from black cherries, is used ; in Sweden, *branvin*, made from potatoes and grains, is used ; in Sumatra, *nera*, made from the palm, is used ; in Turkey, *yaourt*, made from milk, is used ; while the English, French, Germans, and Americans, drink brandy, whiskey, beer, and wine. There is, probably, no more destructive drink than the distilled tincture of wormwood, called *absinthe*, which has caused so much insanity in France. In nearly all of the popular “*bitters*” and “*tonics*,” there is from 6 to 44 per cent. of alcohol.

As alcohol has great attraction for water, we naturally find more alcohol in the blood and in the brain than elsewhere, as the blood has about 79 per cent. of water and the brain about 72 per cent. ; but alcohol has no special elective affinity for the brain, except the watery state of the brain. If the use of alcohol cannot either give strength to the

body, will not protect against either cold or heat, increases crime and disease in communities, injures discipline in armies and navies—and we shall endeavor to prove all this—then State medicine is surely justified in warning the public against even its moderate daily use, and instructing them that it is a *poison* to be used only as a medicine by physicians, and then preferably as alcohol, and not as brandy or whiskey, since these are so adulterated. Ask experts on military hygiene whether they approve of issuing alcoholic beverages to the soldier, and they will tell you that the troops bear cold, heat, and fatigue, better without than with the use of alcohol. Shall Commonwealths sanction what the leaders of military hygiene declare to be an unmitigated evil?

Many of our most eminent physicians to-day are beginning to realize that the use of alcohol, even in acute and chronic diseases, is not unattended with danger to the patient, and that good results accruing from its free use are very problematical. I always treat the disease of inebriety by stopping the habitual allowance of alcohol; and from an extended experience in this disease, I can testify that this course is not dangerous to the patient, but the reverse; that it permits a cure which no other plan of treatment will bring about. Casper says that here, in Berlin, one third of all your cases of insanity are due to alcohol. According to the Inspector-General of Prisons in Belgium, four-fifths of the crime and social misery is directly owing to intemperance.

What you in Germany call *Trunksucht*, and we in the United States call *dipsomania*, is a periodical insanity arising from the use of alcohol. It consists of an uncontrollable and intermittent impulse to take alcoholic stimulants, or any other agent which causes intoxication.

The great diagnostic point attending this disease is the irresistible impulse by which the patient is impelled to gratify his morbid propensity, being, during the paroxysm, blind to all the higher emotions, and pursuing a course against which "reason and conscience alike rebel." These

paroxysms are preceded by considerable disturbance of the nervous system. Between his paroxysms, the dipsomaniac is different from a common drunkard in being, perhaps, a useful member of society. These patients may abstain for weeks and months from all stimulants; but if not cured, his paroxysms will inevitably recur, and he then drinks to intoxication for a week or a fortnight. These cases need medical treatment and remedial restraint for one year if they are to be permanently cured. There are thousands of such cases in every city; and why will not State medicine demand that the Commonwealth shall put the poison—alcohol—beyond the reach of these unfortunates, who ruin, not only themselves, but their families? We must work in earnest, and have the courage of our convictions, if we are to make a public sentiment that will be adequate to promote temperance and do away with alcohol as a beverage.

State medicine should declare to the newly-married that by indulgence in alcohol they will surely transmit to their child the qualities of a brain whose temper has the flow of a predisposition to degenerate mental function. We all know, if we are scientific men, that moral feeling and will are impaired or destroyed by degeneration going on through generations, by the disorganizing effects of disease, and by direct physical injury to the brain. It is the duty of those interested in State medicine to keep constantly before the public the fact that the same effects are produced by the chemical action of alcohol, which, when taken in excess, are poisons to the brain. We should teach them, even as children, that the alcohol enters the blood, is carried by it to the brain, producing an abnormal state of its finest, latest organized, and least stable parts, ruining their moral feeling and their will, and producing the disease of inebriety, epilepsy, idiocy, and insanity; making them a burden on the State, and plunging their families in social misery.

The source of the cause of intemperance we shall find in ourselves and in our ancestral antecedents, and to suppress it we must eradicate it in ourselves and in our posterity.

Alcohol begins by unravelling the finest, most delicate, most intricately woven and last completed threads of the marvellously complex network of the brain, and end by mental dissolution. Mothers, you have young sons and daughters! You have brought them up to exhibit diffidence and self-restraint, with refined manners and modest conversation; have inculcated chaste conduct; have taught your sons that, as they grow older, they must have prudence in business and candor and honorable dealing. Indulge in alcohol as a beverage, and have it in your house, and on your table daily, and the result will be that, with a broken heart, you will see the poison surely do its cursed work in a bold and presumptuous address, coarse behavior, and indelicate allusions, indecency, and open lasciviousness; foolhardiness in speculation; duplicity and guile and criminal tendencies; and finally, if not positive intellectual derangement, some of them die a drunkard's death. The poison of alcohol has deranged the character almost from the start.

The State is interested in the highest degree in the alcohol question, for this reason: If a certain proportion of individuals take a certain quantity of alcoholic stimulant daily, there will be an exact equivalent produced of lessening of judgment and reason—*i. e.*, of the higher faculties; and the alcohol introduced into the digestive canal acts in a noxious manner on the vital properties or the texture of the organs of the body, so that the individual uses an inferior judgment and reason when at his work, and he cannot do as much work as if he were a total abstainer. The work done is not equal either in quality or quantity to that of the total abstainer, and the State is the loser thereby; while the idiocy, epilepsy, or insanity of the offspring often entails much cost to the State, as it has to provide for the idiots, epileptic, insane, and criminals, caused by intemperance, and it spends great sums annually in caring for the physical, moral, and mental wrecks, who are made so by alcohol, which could be saved to the State would they educate the people as to the nature and effects of alcohol.

Alcohol is not a food, as it is not capable of being converted into the substance of tissue, and can evolve no force within the body. It has been held that alcohol is oxidized in the body and appropriated by the tissues in a useful way, but this is a gratuitous assumption, which no chemist can prove. It has been claimed that this is so, because all of the alcohol ingested could not be detected, as escaping from the body. I do not know of a chemist who would like to take the contract of detecting all the alcohol which can be mixed with freshly drawn blood, for the simple reason that the blood has the power of concealing a good deal of the alcohol which is once mixed with it, so that our finest chemical re-agents cannot detect it.

We come now to *the physiological action of alcohol*. It will be our aim in the following remarks to present clear, authoritative facts on the physiological action of alcohol, avoiding all the conflicting, contradictory, and uncertain theories which have so frequently been presented. My opinions are the result of both an active and a thoughtful acquaintance with the subject, extending over several years. We can only appreciate the injuries that are done to the human body by alcohol through the study of its physiological action. We propose to show just what the nature and effect of alcohol is upon the blood, the brain, the nervous system and mind; the heart, the lungs, the liver, the kidneys, and all the organs of the human body. Whether it be taken as spirit, ale, or wine, all drink the same poison under different forms—the effects of it upon the human body being determined by climate, temperament, mode of life, and the character of the stimulant used.

As we have before remarked, the stimulating nature of the climate of the Atlantic coast in the United States, combined with the extremes of heat and cold, causes the physical and mental constitution to be much more injuriously affected by alcohol, than is the case in Italy, Greece, Turkey, Spain and Germany. The greatest amount of disease and injury from alcohol is always seen wherever the climate and

the nervous temperament of the inhabitants render the effect of indulgence in alcoholic stimulants especially hurtful to the brain and nervous system. This is nowhere more noticeable than in the United States, especially on the Atlantic coast, where the peculiarly stimulating nature of the climate induces a peculiar nervous susceptibility, which operates in the production of grave diseases of the mind and nervous system, as well as other parts of the body. If the alcohol habit be indulged in with respect to the plea for the introduction of light wines and beer, it is a significant fact that the almost universal use of light wines in France has not prevented the people from resorting to absinthe and other strong stimulants, while in one French asylum, out of 302 cases, insanity was attributed to drink in 102 instances.

M. Lumier, of France, has shown that alcohol from cider is worse than that from beet root or grain and also that in those departments where the people drink relatively much white wine, alcoholic insanity is almost as frequent as in the people of those districts in which they drink principally alcohol. He shows that these white wines are nearly as noxious in their effects on the body as spirit from beet root or grain. We think it almost an impossibility on the Atlantic coast for any young man or woman of seventeen years of age to commence indulging in wine and beer daily and not feel a growing desire for some more powerful stimulant, and they will soon resort either to the habitual use of distilled liquors, such as whiskey or brandy, or fall victims to the disease of dipsomania, where the unhappy person is periodically driven by a wild, irresistible, uncontrollable craving for alcohol, into attacks of drinking, ending nearly always in complete intoxication. I have seen this so often during the past twenty years, that I regard it as a settled fact.

We have noticed, also, that it is not the coarse-fibred people, but the brightest men and women of society, who by virtue of their fine nervous organization, most readily become affected by the disease of inebriety. There is no more

potent temperance argument, than to hear an elegant cultured man or woman, deploring in agony of remorse the fierce appetite for alcohol, which periodically masters him or her, and which the will is powerless to resist, as the daily, and at first, moderate indulgence in alcohol has insidiously drawn the person into the vortex of the disease of dipsomania.

The average number of beats of the heart in twenty-four hours in a water drinker, is approximately about 106,000. As alcohol is taken in increasing quantities, this average number rises to about 127,000, and at a later stage to about 131,000. This extra work which the heart is made to do by alcohol, makes it, after awhile, enlarge or hypertrophy, as the heart is beating about 25,000 times oftener in twenty-four hours than it ought to do.

If a person entirely unaccustomed to alcohol takes one fluid ounce of it, his heart will beat 430 times more than the normal in twenty-four hours. With two fluid ounces per day, it will beat 1,872 times more; with six fluid ounces, it will beat 25,000 times more. The heart is made to do this over-work under alcoholic stimulus. Is it any wonder that it finally becomes diseased? The flush which we see on the cheeks of the true drinker is vascular engorgement, and this condition is universal in the tissues and organs of the body.

When a man dies suddenly from apoplexy while drinking, as sometimes happens, and an examination of the body is made, we find that the lungs participate in this vascular engorgement. When the brain and spinal cord are exposed to view, they are found in the same condition. The stomach, liver, kidneys, and spleen, also show this engorged condition. We know that the cerebral cells are nourished by the proper and due supply of nutritive plasma from the blood, and that this is essential to healthy function; and indeed the ultimate condition of mind with which we are now acquainted, consists in the due nutritive growth and renovation of the brain cells.

If now we take into the system an amount of alcohol that causes the blood plasma to convey to the brain cells a noxious and poisonous, in place of a nutritive substance, stimulating the cells so as to hasten the progress of decay and waste, beyond the power of reparation and renovation, and impressing a pathological state in them, we must inevitably have resulting a change of healthy function, and a certain amount of disease produced.

Owing to the abuse of alcohol, we have resulting a change in the chemical composition of the cerebral cells from the standard of health, which is the foundation of organic disease, as it prevents and interrupts healthy function. As a result of the overfilling of the cerebral vessels or hyperæmia of the brain from the continued use of alcohol, we have, at first, symptoms of irritation, due to increased excitability of the nervous filaments and ganglion cells of the brain.

The symptoms of exhaustion and depression occurring at a later stage, are due to lost excitability of the nerve filaments and ganglion cells of the brain, owing to the want of the proper supply of arterial oxygenated blood to them. This is caused by the excessive cerebral hyperæmia, the escape of venous blood from the brain being obstructed, the result being that no new arterial blood can enter the capillaries. We may have apoplectiform or epileptiform attacks, and paralysis occurring in the course of these cerebral hyperæmias, and they may be due either to obstructed escape of venous blood, or to secondary œdema of the brain, in which transudation of the serum takes place into the perivascular spaces and interstitial tissue of the brain, with consequent anæmia.

The information that has been gained regarding the morbid change that takes place in the brain and its appendages as a result of the abuse of alcohol, shows that analogous changes take place in chronic alcoholism and chronic insanity—namely, atrophy and induration of the brain, and thickening and infiltration of the membranes. The nerve cells have also been found to be the seat of granular degen-

eration in some instances. We find thickening and increase of the pia mater and arachnoid and permanent infiltration of the former, and a varicose condition of its vessels as a result of continued abuse of alcohol. If there exists a permanently congested and thickened state of the pia mater, it is extremely probable that if it becomes suddenly turgid and hyperæmic as a result of severe emotional disturbances, we shall have resulting from the increased pressure on the brain, coma, epileptiform and apoplectiform attacks and other grave nervous symptoms. The first changes that occur are repeated attacks of active cerebral congestion, followed by chronic cerebral congestion and chronic cerebral meningitis; as the disease of inebriety assumes a chronic form, we have the brain taking on a secondary change, and becoming anæmic, atrophic, and indurated.

The *prominent symptoms* are impairment of memory, dullness of intellect, bordering on dementia, trembling of the limbs, tottering gait, hesitating, slurring speech, and other symptoms indicative of gradually progressing paralysis. Muscular power and nervous force are also lessened by alcohol; and as the brain is affected, the reasoning powers grow weak, and the emotions and passions rule the man or woman as the case may be. All the animal instincts now guide the person, instead of his reasoning faculties, which he or she has weakened, perverted, or destroyed by the use of alcohol. There is also a fall of bodily temperature from the use of alcohol. The blood is directly affected by alcohol, in that the red blood corpuscles, which are the carriers of oxygen all over the body, are "cremated," or rendered irregular in form. This is readily seen under the microscope. All the membranes which cover and protect all the organs of the body, are directly affected by alcohol, as they are very delicately organized. They become either thickened (they shrink) or they become inactive and lose their functional power.

Alcohol does not always kill rapidly, but it kills surely, and its continual use, even in daily moderation in most per-

sons, confuses the finer operations of the brain and mind. All great explorers and generals agree that its daily use diminishes the power of endurance of the individual who habitually uses it. The temporary excitement and artificial strength it imparts, are at the expense of the vital force. It is not a food and adds nothing to the living tissues. It depresses nervous force every time. The abuse of it means intellectual and physical death, perhaps slow, but very sure. A great many men give out unaccountably in the prime of life and become invalids. Upon inquiry, we often find that these men have been for years moderate drinkers, and it takes months of rest and careful nursing to bring them up so that they can get back their lost nervous force and vitality which alcohol has depressed. There is also mental depression, and a very emotional state, and insomnia.

We will now proceed to look in regular order at the different functions of the body, and examine the diseases which alcohol produces in them. The human body is composed of organs destined to accomplish the acts of life called functions. These functions are divided into two distinct classes: First. The functions of nutrition. Second. The functions of relation. To the nutritive functions are assigned the apparatus of digestion, circulation, and respiration: To the functions of relation, the apparatus of locomotion, the nervous system, and the organs of sense. Looking first at the functions of nutrition, the purpose of which is to provide for the preservation and the renovation of the human body, we will see what the physiological effects of alcohol are upon digestion, circulation, and respiration; and then, passing on to the functions of relation, see what the physiological effects of alcohol are upon the brain and nervous system, and the organs of sense.

1. *Physiological Effect of Alcohol upon Digestion.*—Digestion, as is well known, is a function which causes the alimentary substances introduced into the digestive apparatus to undergo several modifications, having for their object the

transformation of those substances into two parts, the one nutritive, the chyle, which renovates the blood, and builds up our organs; and the other, non-assimilable excrementitious part, which is cast off from the system. Alcohol irritates the stomach and injures it, inducing a large number of human ailments due to deranged nutrition set up by alcohol. Inflammatory dyspepsia, and gastric catarrh, and changes in the gastric juice, are very common, and ulceration sometimes occurs. A great deal of disease proceeds from mal-nutrition, and derangement of the digestive process disturbs the life's system at its very source. The surface of the stomach in alcoholics, presents a widely different appearance from that of water drinkers. It presents a mammilated appearance, and a brownish gray color, with patches of congestion. Food is of no earthly use to a person beyond his power of assimilating it, and alcohol destroys the power of assimilation. The use of alcohol, particularly before meals, is a cause of a great deal of disease affecting the digestive system. The very worst thing a man can do is to take alcohol before breakfast, fasting. This is provocative of more chronic dyspepsia than all other causes combined. A morbid hyperæmia of the stomach is induced, which quickly results in inflammation. The liquids unsuited for nutrition are eliminated from the body in large part by the kidneys. The use of alcohol retards tissue metamorphosis, and thereby decreases the excretion or elimination of effete matter, or impurities contained in the blood, so that from the normal accumulation of hydro-carbonaceous material the individual increases in weight, but such persons always exhibit a corresponding decrease in nervous and muscular stamina. Alcohol being a foreign body disturbs the action of the kidneys and irritates them, and is eliminated in great measure as alcohol by them.

It has no claim to be regarded as food, all who assert otherwise, to the contrary notwithstanding. The kidneys become congested in alcoholics, and many cases of Bright's disease ending in death are directly traceable to alcohol.

2. *Physiological Action of Alcohol upon Circulation.*—The circulation comprises the transmission of the blood from the respiratory apparatus to all the organs of the body, and the return of the blood from these organs to the same apparatus. The effect of the alcohol in the blood and circulation is, that the blood becomes impure and unfit to nourish the body and its organs. The heart may become enlarged, fatty, and soft, and liable to break down very suddenly. In quantities of varying disease, alcohol affects the blood, making that fluid unduly thin, or coagulating it, according to the absorption of it into the circulating system. It acts on the blood corpuscles, causing them to undergo modifications of size, and reducing their power of absorbing oxygen. It changes the natural action of the heart, causing it to beat with undue rapidity, and increasing the action in extreme instances to such a degree that the organ in adult man is driven to the performance of an excess of work equal to the labor of lifting over twenty-four tons one foot in twenty-four hours.

3. *Physiological Action of Alcohol in Respiration.*—The respiratory functions has for its objects the transformation of the dark venous blood into red, arterial blood. Alcohol congests the lungs, predisposing to pleurisy, pneumonia, and one form of consumption. The lungs, like all the other vital organs, have their delicate vascular structure governed by the nervous system or current, and by reason of the weakened blood vessels, are congested or overfilled with blood, just as the face of an alcoholic is flushed with wine. The nervous power of the lungs is paralyzed by the alcohol, and a very fatal form of consumption, known as fibroid alcoholic phthisis, induced. The action of alcohol on the throat, mouth, and nose, is that of affecting the delicate mucous membrane lining them, and causing a husky voice or chronic catarrh.

ART. IV.—Observations on “Koch’s Lymph.”

By JOSEPH JONES, M. D., of New Orleans, La.

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In the May number, 1891, of the *Virginia Medical Monthly*, full text of the correspondence with, and report to President Harrison is given with reference to a vial of “Koch’s lymph”—the now so-called *tuberculin*—sent by the American Minister in Germany to the President, and by him sent to the writer for scientific investigation and practical use. In presenting the following further notes, it will be necessary to quote freely from the communication just alluded to.

The term “*lymph*,” originally applied to the product of the *pathological laboratory*,” is inappropriate. Lymph is applied to the fluid in the lymphatic vessels, the product of the filtration of the liquid portion of the blood through the walls of the capillaries; also to certain products of lymph exudation in wounds, and inflamed and diseased structures. The more recent term, *tuberculin*, is more appropriate, in that it indicates the origin of the liquid in at least a portion of its heterogeneous elements and products, from the infectious disease, *tuberculosis*, due to a specific bacillus, and characterized by the formation of tubercles in various parts of the body. At the same time, no distinct or definite chemical product has been separated from the cultures of the tubercular bacilli to which the term “*tuberculin*” can be applied.

The small vial, received as “Koch’s lymph,” contained about five grammes of a dark brownish-red liquid, accompanied by directions for its use, signed by Dr. A. Libbertz, of Berlin. A portion of it was placed at the disposal of the Medical and Surgical Staff of the Charity Hospital of Louisiana.

Our knowledge of the therapeutic value of remedial agents rests upon the careful studies of intelligent and progressive physicians; and if the Resident Surgeon and Staff

of the Charity Hospital, of New Orleans, had produced reports of cases of tuberculosis treated by the method of Koch, said reports would have been forwarded to His Excellency, President Harrison, for transmission to the American Minister in Germany.

About three months later (in April, 1891), Dr. Miles reported that although he had placed a notice on the Bulletin Board, "inviting others to use it in safe bounds, if they thought proper, no one had applied to use it. For himself, he did not care to use it yet, as he did not deem the 'lymph' or its substance, sufficiently understood.

"That this agent or drug was not used in the treatment of diseases under my care in the wards of the Charity Hospital of New Orleans was due to the following causes:

(a) No case presented itself which I deemed suited to the application of 'Koch's Treatment,' without danger to the welfare of the patient.

(b) No case presented itself of which the diagnosis was so obscure as to require the institution of a doubtful experiment."

Note.—Although most probably first suggested by the results of *inoculation* for small-pox and cow-pox, the methods of Pasteur and Koch rest upon different hypotheses, and relate directly to the action of pathogenic micro-organisms upon certain culture media, and to the peculiar products of these simple organisms—the process of bacterial or bacillary development and multiplication, under certain circumstances, being essential to the production of certain products possessing peculiar powers and effects when injected into healthy and diseased human organisms.

The matter of cow-pox owes its potency to the germinal power derived directly from the primoidal source, and not to any subsequent change or cultivation, after its withdrawal from the living source.

Altered, fermented or putrid vaccine matter, or vaccine matter derived from a diseased source, may produce poisonous and destructive effects, due to the development of ptomaines or other organic and infectious organic bodies. The processes of Pasteur and Koch are intimately associated with the decomposition and putrefaction of nitrogenized compounds

and the development and life acts of pathogenic micro-organisms.

The author, during the American Civil War, 1861-1865, and subsequently, made small-pox, cow-pox, vaccination and spurious vaccination the subjects of elaborate investigation.*

(c) "Without exception, the patients under my treatment and care in the wards of the Charity Hospital declined to submit to this mode of treatment.

(d) The extensive prevalence of influenza in a severe and often fatal form, and which attacked, with special violence, those suffering with phthisis pulmonalis, rendered the injection of an irritating agent into the living human body hazardous."

"The objectives employed in the following observations of the contents of vial of Koch's lymph, ranged from $\frac{1}{8}$ to $\frac{1}{16}$ of an inch. These precautions were taken to secure such results as were possible in the chemical and microscopical manipulation of the small amount of material.

Properties of Koch's Lymph.—1. Reddish brown liquid, with oily movement and consistence of thin glycerin.

2. Clear, with a few flocculi.

3. Musty odor, like that of stale beef extract.

4. When burned in flame of alcohol lamp, emits an odor like burning beef extract.

5. Reaction strongly alkaline.

6. When a drop of the undiluted extract was placed in the eye of a living animal, it appeared to cause a disagreeable sensation, attended with a closing of the lids temporarily, but it induced no permanent irritation or inflammation. A repetition of this experiment caused no perceptible injury to the eye or animal.

7. No appreciable effects were induced by the "lymph," when administered internally, by the mouth, to living animals. The fluid, in its innocuous effects, when applied to living mucous membranes, differed from the poison alkalis, and from hydrocyanic acid and the cyanogen compounds.

8. Mingles rapidly and freely in all proportions with distilled water.

9. When injected with varying degrees of dilution with

* See *Medical and Surgical Memoirs*, by Joseph Jones, M. D., Volume III, 1890, Part I, pp. 108-542.

distilled water (50 per cent., 25 per cent., 10 per cent., 1 per cent., or 0.1 per cent.) into the subcutaneous tissues of living animals (cats, rabbits, and guinea pigs), only slight local irritation and no sloughing were induced at the points of injection. The injections were followed by fever of greater or less duration. The animals appeared to regain their normal conditions in varying periods of from four to seven days, but were reserved for future observation.

Note.—Rabbits, thus treated, died in from three to four weeks: guinea pigs at the end of six weeks; death was preceded by loss of flesh and diarrhoea. The feline race resisted the action of the *Koch's lymph* more vigorously than rabbits and guinea pigs, although the initial reaction was well marked.

The liquid appeared to be far inferior in immediate effects, when injected subcutaneously, to prussic acid, strychnine and serpent poison; neither were its manifest effects identical with septic poison.

Note.—Our knowledge of ptomaines (putrefactive alkaloids—a class of nitrogenous alkaloidal basis of both animal and vegetable origin, formed during the putrefaction of organic matter) is being continually enlarged. Physiologists have shown that some are poisonous, but the greater number of those isolated are not so. All toxic products of putrefaction are not ptomaines. Since all putrefaction is dependent on micro-organisms, the formation of ptomaines is also dependent upon them, each distinctive ptomaine being probably due to a peculiar bacterium or combination of such. The dependence may sometimes be indirect and complicated with, or also dependent upon purely chemical changes. The period of ptomaine is also dependent upon the stage of putrefaction, as there are "transition products in the process of putrefaction," intermediate of katabolism, finally becoming the end products of excretion. Foods have been found to contain ptomaines, the principal being mussels, oysters, eels, sausage, ham, canned meats, cheese, milk, ice cream, etc. The pathogenic action of many bacteria is probably due to their production of ptomaines. A number of unnamed substances have been studied that

possess reactions and physiological effects similar or identical with well-known vegetable alkaloids. These at present can only be called after analogues—*e. g.*, coniin-like substances; others are called nicotine-like, strychnine-like, morphine-like, atropine-like, digitaline-like, veratrine-like, delphinine-like, etc.

Selmi found ptomaropines, or cadaveric ptomaines, so closely resembling the vegetable products, that when treated with sulphuric acid and oxidizing agents, they gave the odor of blossoms (Reuss's test) as distinctly as the vegetable atropine.

A powerful poison has been found in exhumed bodies, giving reactions similar to strychnine, though by no means identical with the latter.

Selmi believed for some time in a "cadaveric coniin," so difficult was it to discern the proteid product from a vegetable alkaloid; and even now it is very difficult for the chemist to state with certainty that he has found true coniin in the dead body, unless the analysis be made before decomposition sets in, and enough of the same be found for physiological experiments. Other ptomaines have been actually mistaken by experts for morphine, etc.

Various chemists, as Brieger, Nencki, Gautier, Etard, Guaresti, Mosso, Morin, Oser, Salkowski, Pouchet, and Vaughan, have described over forty ptomaines, the ultimate chemical composition of which have been determined, and one-half of these nitrogenized compounds have been shown by physiological experiments to be *poisonous*. The characteristics of seventy-two of the more important bacilli have been recorded by bacteriologists, thirty of which are regarded as *pathogenic*, including the bacillus tuberculosis of Koch.

In the action of bacilli upon nitrogenized bodies and hydro-carbons, such as those contained in beef broths, a'gar-a'gar (a Ceylon moss used by bacteriologists for the culture of micro-organisms), gelatine, blood serum, and boiled white of egg, and boiled potato, it seems reasonable to sup-

pose that poisonous ptomaines, and especially *septine* (the ultimate poisonous product of putrid fermentation) should be found.

For an extended description of pathogenic micro-organisms, and elaborate discussion of their relations to fermentation, putrefaction, and diseased process, see *Medical and Surgical Memoirs*, by Joseph Jones, M. D., Volume II, Chapter III, pp. 277-497; Chapters IX-XVII, pp. 1188-1332.

Other properties of tuberculin are:

10. Uncoagulated by heat.
11. Uncoagulated by nitric acid.
12. Uncoagulated by heat and nitric acid.
13. Chemically pure absolute alcohol threw down from the "lymph" a flocculent, whitish deposit.
14. Solution of nitrate of silver threw down a heavy, white deposit, showing the presence of chlorides in considerable amount.
15. Soluble barium salts gave slight precipitates.
16. Stannous salts gave no evidence of the salts of gold.
17. Microscopic examination of the undiluted "Koch's lymph," with objectives varying from $\frac{1}{8}$ to $\frac{1}{15}$ of an inch, revealed the presence of minute ovoid and rod-shaped bodies resembling the *spores* and *bacilli* of the "*bacillus tuberculosis*," as described by the eminent microscopist, Professor Robert Koch. These organisms, in their size and structure, and behavior with staining agents, corresponded with the "*bacillus tuberculosis*."

Note.—As far as our information extends, the essential steps in the preparation of Koch's lymph, or tuberculin, are as follows:

1. Guinea pigs are inoculated with the sputum of tubercular patients, containing tubercular bacilli as determined by microscopical examination. The guinea pigs thus inoculated generally die from the tubercular disease thus induced, in from three to six weeks. The bodies of the dead guinea pigs are dissected, and tubercular masses containing the tubercular bacilli and their spores, are spread over the surface of sterilized peptonized jelly and a'gar-a'gar. To prepare the culture fluid, about 500 grammes of beef are boiled with about 1000 grammes of water, thus forming a

beef broth, to which is added about 5 per cent. of gelatine, or a'gar-a'gar. This culture medium solidifies upon cooling.

2. These cultures are subjected to definite degrees of temperature in the inoculation, and are also carefully protected from the influence of the atmospheric germs, and are allowed to stand from three to six weeks. The increase of the tubercle bacilli, is indicated by the formation of a grayish layer upon the surface of the culture tuberculin.

3. When once a crop of tubercle bacilli is thus obtained, they may be indefinitely multiplied through successive generations by adding small portions of the gray matter to the culture median in glass tubes, carefully protected from extraneous atmospheric germs, and subjected to definite degree of temperature. Pure cultures are thus obtained and propagated.

4. The gray cultivated tubercular matter is mixed with water and glycerin in about equal proportions. The mixture of the cultivated bacilli with glycerin and water is then passed through an enlarged porcelain filter—Pasteur's filter—the filtration being aided by atmosphere pressure.

5. The cultivated tubercular bacilli mixed with water and glycerine, and passed through the unglazed porcelain filter of Pasteur, is said to be *Koch's Lymph* or *Tuberculin*. A small quantity of tri-chloride of iodine is said to be added to the tuberculin.

6. If the preceding report of the process of preparing tuberculin be correct, it is evident that it is not subjected to high temperature, nor to any other procedure, other than filtration through an inorganic septum. The *tuberculin* thus prepared evidently contains the living germinal matter of the tubercular bacilli. Without doubt, the spores of the bacilli, and even the bacilli themselves, may pass through the pores of the unglazed porcelain filter.

It is evident also that the *tuberculin* must contain the products of the decomposed beef broth, gelatine, and a'gar-a'gar, resulting from the action of the tubercle bacilli.

Differences in the action of the tuberculin may be referred to various causes, as

1st. Different conditions of health or disease of the individuals subjected to the treatment of Koch.

2nd. Differences in the chemical constitution of the different cultures and samples of tuberculin.

3rd. The existence or non-existence in tuberculin of pathogenic germs and spores, other than those of the tubercular bacillus

4th. The extent and character of the pathological changes induced in the blood and tissues of individuals inoculated with tuberculin.

Still other properties of tuberculin are:

18. When the lymph was diluted with boiled distilled water, and preserved in chemically clean test-tubes, the mouths of which were carefully guarded by antiseptic cotton wool, the fluid became turbid. Microscopic examinations revealed the fact that the turbidity was due to the multiplication of organisms presenting physical and chemical properties similar to those of the "*bacillus tuberculosis*."

19. The addition of a drop of the "lymph" to "Pasteur's sterilized liquid" was followed by the development of the spores, and slender, rod-shaped organisms resembling the "*bacillus tuberculosis*."

20. The spores and bacilli of "Koch's lymph" were cultivated, with the necessary precautions to exclude all external germs from the atmosphere and external objects, upon various substances or media, as serum, blood, boiled potato, coagulated white of egg, and boiled aseptic crystalized sugar.

21. The cultivations in fresh blood were strongly alkaline; those of potato, white of egg, and crystallized sugar were acid.

22. When a small quantity of the "lymph" was added to a carefully sterilized solution of crystallizable sugar, the clear solution became turbid from the development of bacilli, and emitted a sweetish odor, similar to that which I have often observed to be exhaled by patients suffering from phthisis pulmonalis in the advanced stages.

Conclusions.—(a) The active principles of "Koch's lymph" appear to reside in a colloid nitrogenized compound, coagulable by absolute alcohol, and in living germs—microorganisms—spores and bacilli, similar to those of the *bacillus tuberculosis*, and capable of multiplying within and without the living organism.

(b) The potent effects of "Koch's lymph," when introduced into the blood of healthy and diseased human beings, may be referred, in part at least, to the rapid multiplication and action of micro-organisms, similar to, if not identical with, the bacillus tuberculosis.

(c) The results of the chemical and microscopical examination of the contents of this vial of "Koch's lymph" have led me to exclude this liquid from the list of remedial agents.

Note.—The excitement occasioned by the extraordinary statements with reference to the curative powers of Koch's mode of treating tuberculosis, led to a careful review of all the remedial agencies, at the command of the author in his civil, military, and hospital practice during the past thirty-five years (1855–1891), and his faith in the following measures and agents has been strengthened.

1. Public and domestic hygiene: (a) location of dwellings, villages, towns, and cities; (b) water supply; (c) drainage, sewerage; (d) ventilation and heating; (e) food supply, meat, and milk supply; (f) domestic sanitation.

2. Meteorological conditions or climate.

3. Food.

4. Clothing.

5. Exercise; intelligent and progressive physical development of children.

6. Remedial agents: (a) counter irritants; (b) carefully regulated respiration and out-door exercise; (c) nitrogenized and non-nitrogenized aliments; (d) pepsine; (e) cod liver oil, glycerine, and fats; (f) phosphate of lime and iron; (g) hypophosphites of iron, manganese, calcium, potassium, and sodium; (h) iodine; (i) iron and its preparations; (j) wine and alcoholic preparations in moderation; (k) mineral acids; (l) vegetable tonics, nux vomica, preparations of bark, etc.; (m) tar, tolu, and creasote; (n) antipyretics; (o) opiates when indicated. In the treatment of phthisis, the hygiene and climate, in conjunction with the *materia alimentaria*, should be regarded as superior to the *materia medica*.

ART. V.—Diphtheria—Some Notes on its Pathology, Histology, and a New Plan of Treatment.*

By JOHN W. WILLIAMS, M. D., of Richmond, Va.

The skin and mucous membrane are covered by a layer of epithelium so arranged that solution of continuity must take place before bacteria or germs can have access to the tissues within. Hence, a wound of this epithelium is absolutely necessary to infection—to sepsis. In other words, septicæmia or pyæmia cannot take place without a wound in this epithelial layer, through which wound the bacteria enter the blood, and systemic intoxication follows as a consequence.

All injuries causing wounds—whether the keen edge of the flashing stiletto or the jagged and rough section of a shell—destroy the life of those cells that lie in the path of the cutting or lacerating instrument. The blood and lymph exuding from the vessels coagulate, and necrosis follows. If a number of active micrococci from the surrounding air or dirt attack this wound, they find a congenial soil for their development and multiplication. The fermentative decomposition here set up produces certain chemical alkaloids or extremely poisonous substances—the *ptomaines*.

The ptomaines at once enter the general circulation; systemic intoxication ensues, manifested by a marked rise of temperature, rigors, nausea, headache, delirium, and asthenia—septic fever. The extension of septic material is twofold: First, by infiltrating the tissue interstices by columns of micrococci; and, secondly, by way of the lymphatics. It seems probable that in diphtheria† the Klebs Loeffler ba-

* Read before the Richmond Medical and Surgical Society, February 16th, 1892.

† The old Roman physicians called it "angina," and the Greeks "cynanche"—"Nostri *anginam* vocant: Græcos nomen *cynanche*."—Celsus, caput IV, p. 257. Its present name (*diphtheria*) was given by M. Bretonneau, of France, in 1818. It is thought that descriptions of this disease can be traced to a time anterior to Hippocrates (460 B. C.) and that Aretanes, of Cappadocia, described it (100 A. D.). One of the earliest treatises was by Hecker, who described an epidemic that prevailed in Holland in 1337. Dr. Fothergill gives a description of the epidemic that appeared in London in 1745, and Dr Samuel Bard, of New York, describes the epidemic that swept the country in 1771.

cillus utilizes both of these ways. If the parts affected are loose tissues, the infection will be rapid; if the parts are dense, the inflammation is localized so long as the tissue-density resists the pressure of the imprisoned secretions.

The tonsils and cervical glands being vascular bodies and loose in their anatomical structure, become easily infiltrated by columns of micrococci, which burrow down to the depth of a *quarter of an inch* in the tissue and *below* the surface (Prudden-Seibert). Here inflammation takes place, which results in an exudation of serum and leucocytes accumulating in the upper epithelial layer of the mucosa, thus producing the false membrane of diphtheria. In view of this pathological fact, all washes and gargles are useless, just because they do not and cannot reach down to the microbe burrowing beneath the surface. The mortality from diphtheria in the city of New York during ten months of the year 1890 amounted to 1,725 out of 4,340 cases, and nowhere is the bichloride of mercury treatment more extensively used than in New York; yet here is frightful mortality. "Of the strength of 1:500, thousands of micrococci remained alive at the end of fifteen minutes."—(Prudden.) Given of this strength, you kill your patient; in weak solutions, you fail to kill the streptococcus; and in either case you fail to reach the microbe. This treatment is not efficient because it does not reach the bacilli at work below the mucosa. It does not penetrate the false membrane, but glides off its surface into the œsophagus; it is not, properly speaking, a local treatment, because the seat of the disease is not reached; and it is not germicidal, because the solution is not strong enough to destroy the diphtheritic germs. Chlorate of potassa, benzoate of soda, boric acid, *et omne genus*, may at once be struck from the list as topical agents curative of diphtheria.

In the very nature of diphtheria, the only scientific treatment must be a germicidal one. Carbolic acid and corrosive sublimate solutions, when used of sufficient strength, will inevitably produce systemic intoxication. The sooner local treatment is commenced the better the chances of pre-

venting the general infection. An early diagnosis is therefore indispensable. A bit of the pseudo membrane should at once be removed, dried on a cover-glass, stained with fuschin or gentian violet, and placed under the microscope for examination.† The microscope was invented about the latter part of the sixteenth century, and in 1646 Kircher suggested that disease might be due to minute organisms. Van Leuwenhorck, of Holland, pushed his investigations further (1680–1723); Andy in 1701, Muller in 1786, Ehrenburg in 1833, went still further. But it was not until 1863 that Davani established a connection between bacteria and disease. The first complete study of a contagious affection was made by Pasteur in 1869; then Koch in 1875; and finally Klebs-Loeffler differentiated the bacteria of diphtheria, in 1884, as “small, slightly-curved rods, about as long as the tubercle bacilli and twice as broad; the ends are, at times, swollen.”

Inoculation.—Brieger and Fränkel, by injecting ten to twenty per cent of a three-weeks’-old culture of diphtheria bacilli, produced an immunity in guinea-pigs against the virulent form. Drs. Wood and Formad, of the University of Pennsylvania, have been invited by the National Board of Health “to determine whether it is possible to produce diphtheria in the lower animals by inoculation.” Seibert has inoculated eighty animals. Here, stretching out before us, is a new and most inviting field for the scientific physician. The day will come soon, and shortly, when children†

† “There are only two germs to be considered in studying the etiology of diphtheria—the *streptococcus* and the *rod-shaped bacillus* with rounded extremities.”—(Oertel.) After all that has been written upon this question, I think it is conservative to say that the identification of the specific microbe and its ptomaines will be the work of the future.

‡ The important discovery made by Behring and Kitasato in 1890, that blood-serum taken from animals that had been rendered immune to tetanus and to diphtheria could cure other animals affected with these diseases, and the further discovery made by the Drs. Klemperer, that serum taken from an animal that had pneumonia contains the *anti-pneumotoxin*, by means of which immunity against pneumonic septicæmia is secured in other animals, should stimulate my medical brethren to push their investigations in this new field under a brighter light—encouraged by a stronger hope.

will be inoculated to insure immunity against diphtheria, as well as from small-pox. Where is the Jenner who will immortalize himself and hand down to posterity a name more precious than a monument of diamonds?

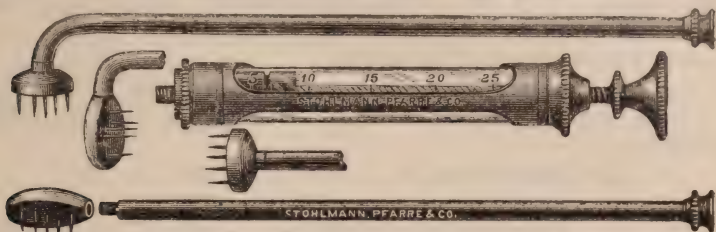
Treatment.—Diphtheria is primarily a local disease. The constitutional symptoms are due to the absorption of the ptomaines from the local lesion. The treatment is essentially germicidal and tonic. Both the pathology and etiology of the disease teach this; besides, it is the most scientific and successful. "It should be clearly held in mind—by those eager to draw from experimental studies on the etiology of this disease such practical lessons as shall be of value in treatment—that it seems to be fully established that in all of the cases the seat of infection and the origin of the mischief is *always a local one*."—(Prudden's "*Studies on the Etiology of Diphtheria*.")

The pseudo-membrane is an exudate from the deeper layer of the mucous membrane, coagulated in the epithelium, and not the disease, but the result of it. If it is removed, mopped, or torn, the points of infection will be multiplied. Let it alone. Geppert has shown that "bacilli will live in a 7 per cent. solution of carbolic acid, and in a 1-1000 solution of the bichloride of mercury for twenty minutes." He also showed that the anthrax bacillus died in ten seconds if brought in contact with a 0.2 per cent. solution of aqua chlorini. "The obvious lesson taught by a definite conception of the nature of the germ which causes diphtheria is not to dally with fancy mixtures, which have at least a moderate germicidal power, but to get at the growing germ, as directly as the seat of the lesion will permit, with some agent that we know will kill it."—(Prudden.)

Traube first made intra-tonsillar injections in diphtheria, and after him Huebner. Traube used a 3 to 5 per cent. solution of carbolic acid twice daily, and reduced the mortality from 35.5 per cent. to 10 per cent. Seibert, in 1891, treated thirty-five cases hypodermically, and lost only two. I treated lately eleven cases, with one death. Case six recovered, and was out on the streets for eight or ten days,

but was stricken with paralysis, and died on the forty-second day.

The hypodermic syringe I use (see illustration) has five tubes or needles fixed to a plate, which is screwed to the barrel, making the instrument eight inches long. These five



needles are one-fourth of an inch in length. The plate is firmly held against the tonsil or pharynx, the needles boldly pressed through the false membrane down to the sub-mucous tissue, where the bacilli are at their deadly work, and the aqua chlorini is at once, by injection, brought in contact with them. In the meantime, however mild the case, I put the patient upon tonics.

R_x—Best beef.....1 lb.
Water.....Oij

Boil down to one pint, strain, and season with salt and pepper; take daily.

Should the constitutional symptoms announce the general systemic infection, the patient being stronger, will be the more readily tided over it.

CASE I.—Mr. R., age 26, *October 2nd*, 7 P. M. Fever 104° for two days previous; false membrane on both tonsils, and infiltration of cervical glands. Injection of gtt. xxx, of aqua chlorini, at 7:15 P. M. into both tonsils through the pseudo-membrane down to the depth of a quarter of an inch.

Oct. 3rd, 9 A. M.—Œdema of both tonsils continues. Intense redness of throat; voice changed. Injection at 9:15 A. M. again the next day. False membrane becoming detached.

Oct. 7th.—Discharged cured. Beef tea, one pint daily, was given this case.

CASE II.—Mr. C., age 18 years, *October 9th*. Fever high;

false membrane on right tonsil; smaller patch on left; œdema and infiltration of cervical glands. Injections.

Oct. 10th, 9 A. M.—Patient worse; œdema increasing, especially of the left cervical glands; 7 P. M., injection, each time into both tonsils.

Oct. 11th.—No fever; false membrane an inch long; patient worse; 9 A. M., injection; antiseptic gargle to clear throat; injections daily; beef tea (1 lb).

Oct. 12th.—Discharged cured.

CASE III.—Mr. C., aged 21; high fever, false membrane on both tonsils; injection in both tonsils as before; liver torpid.

R_x—Euonymin grs. iv
 Leptandrin grs. iij
 Podophyllin (neutral) grs. ij

M.—Make nine pills. S.—One every three hours.

This corrected all hepatic trouble, cleaned off the tongue, and cleared up the complexion. First saw this man *November 24th*. Made daily injections for three days. On 27th, membrane came away. Discharged cured.

CASE IV.—Boy, age 10 years. High fever; false membrane on right tonsil, and on second day on left tonsil also. Injection through false membrane into both tonsils to the depth of a quarter of an inch. On third day false membrane came off. Discharged cured.

CASE V.—Boy, age 4½ years. (In consultation.) False membrane on both tonsils and over nearly the whole of the pharynx; systemic intoxication; the septicæmia well developed; heart feeble. First saw him *October 15th*. Injection at 11 A. M.; injection at 6 P. M.

Oct. 16th, 10:30 A. M. Three injections; at 6 P. M. coughed up tube cast. First membrane loose, and a piece came away an inch long and one-eighth of an inch in thickness. Sent this fine specimen to Dr. Billings, Washington, D. C.

Oct. 17th.—(Edema of cervical glands continues; croupy symptoms; bronchi involved; pulse failing.

R_x—Peroxid. hydrogen ʒij
 Tr. digitalis ʒj
 Fl. ext. sanguinaria canad. ʒij

M.—S.—Teaspoonful every three hours.

Septicæmia no doubt was caused by absorption of the

ptomaines. Beef tea. Alimentary tract disinfected with thymol. Patient gradually growing worse.

Oct. 18th, 2 P. M.—Died of septic infection. I do not think any local treatment will avail after systemic septic intoxication sets in.

CASE VI.—Boy, age $3\frac{1}{2}$ years. Tonsils covered with false membrane; five or six ulcers on leg; had been exposed to the disease; false membrane covered each ulcer. This boy recovered; was out on the streets for a week or so; fattened rapidly, but died on the forty-second day with paralysis,* as mentioned above.

CASE VII.—Lady, age 26; false membrane on both tonsils; injection at once through the necrosed membrane down to mucosa beneath, where the microbes are burrowing; injections daily; discharged cured on the fifth day.

Histology.—Prudden found the streptococcus pyogenes in twenty-two out of twenty-four cases of diphtheria examined by him. We have reasons for believing, on biological and experimental grounds, that not only is the streptococcus pyogenes the etiological factor in diphtheria, but that erisipelas and some forms of phlegmonous inflammations are cognate† diseases with diphtheria. Pruden carried cultures of streptococci from cases of diphtheria side by side with cultures of streptococci, made from various cases of acute erisipelas and phlegmonous inflammation, week after week. Over and over again has he measured and compared the growth from these three sources. He has repeatedly inoculated duplicate sets of animals with the different cultures, and has never found a single, constant feature of difference between them. The close relationship existing between these three forms of inflammation has long since been pointed out by Baumgarten.

In the above cases I had the bedding, napkins, towels, etc., boiled in water for two hours in the same rooms in which I treated the cases. The city should establish a dis-

* "Paralysis occurs in 40 per cent. of the cases."—Brower.

† The uniform presence of the streptococcus in these three diseases, as an etiological factor, indicates a closer relationship than had been supposed, and suggests that future biological studies may demonstrate their identity.

infecting house,† well equipped for this purpose, to which all clothing, bedding, etc., from infectious diseases should be sent. All exudates should be received into vessels containing a 5 per cent. solution of carbolic acid.

During 1891, there were reported to the Board of Health of the city of Richmond 279 cases of diphtheria, with 125 deaths—a death rate of over 44.8 per cent., so far as refers to the number of cases of diphtheria. Of 41 leading cities of the United States, Richmond—claiming a population of 100,000—exceeded them all probably in the death rate from diphtheria.

The following statement gives the number of cases of diphtheria occurring in Richmond each month during 1891:

Jan.	3,	Apr.		July,	38,	Oct.	75,
Feb.	6,	May,	3,	Aug.	48,	Nov.	15,
Mar.	1,	June,	3,	Sep.	79,	Dec.	8.

Total cases, 279; deaths, 125.

ART. VI.—Epidemic Influenza, with Cases Illustrating Some of Its Peculiar Complications.

By S. J. RADCLIFFE, M. D., Washington, D. C.

The following cases occurred in my practice during the recent prevalence of epidemic influenza—the so-called “la grippe”—and may I think be properly recorded among the peculiar freaks, if I may so call them, of this wonderful disease. Two of them are referable to associate involment of the urinary passages, and the other to the peculiar brain symptoms. At other times perhaps these cases would not be so designated, but classified and treated according to the symptoms presented. But in as much as there are, according to all observers, no properly speaking pathognomonic symptoms of the disease, beyond a chill, a fever, pains in the back, limbs and head, and general depression; and as they

† The sulphur fumigation of infectious houses is under the ban of a more advanced science. A large and well-arranged disinfecting plant house is now being planned for the city of New York.

developed surrounded by uncomplicated and undoubted cases of the disorder, I think there can be no misconception or misinterpretation of the symptoms if I consider them in the light of complications, and due to the microbic poison which is considered the fountain and origin of the disease. Perhaps too many cases are recorded as complicated la grippe which, under ordinary circumstances, would not be, but from the general epidemic influence at work; and as the rapidly changing symptoms are accorded to no other disease, undoubted judgment must be given in affirmation of such complications.

First patient, female, aged 45, delicate physically, but of remarkable nervous energy, had enjoyed varying health, with family history of pulmonary disease, was taken about December 1st, 1891, with a rigor, followed by fever, pain in back and head, some cough, and general malaise, and had what she supposed was the grip. She went to bed, took some soothing remedies, but the pain in the back and side was so severe that, at the end of the week, she sent for me. I found on tracing the course of the pain that it started from the region of the left kidney, and followed the course of the ureter. She had pain on pressure over the kidney, and was passing her urine frequently. On examining the urine I found it thick and muddy, and foul smelling; was decidedly acid, sp. gr. 1020, and contained pus and blood corpuscles with some albumen; but no casts, and the diagnosis was easily arrived at, viz: That she was, in addition to her "grip," suffering from acute pyelitis. Poultice to the side and back, a camphor and hyoscyamus pill with salol entirely relieved her pain, and in a week her urine became clear, normal in appearance and free from odor. But her cough suddenly increased in severity, her throat became inflamed, and her trouble was transferred to the respiratory organs. Beginning first in the pharynx, it extended to the larynx, trachea and bronchi, and resulted finally in hypostatic pneumonia, which came near proving fatal as much from the pneumonia, as from cardiac failure, which had resulted from general debility of the whole muscular system. The course of the disease was about six weeks before convalescence began, and it was sometime after before she could even walk across the room.

In this case, the entire assembly of symptoms were taken

as a whole, and they seem to point to one cause. The infectious influenza microbe had entered the system, and appeared to wander about, attacking her weakest points, expending itself on each as it went from one organ to another. The cough was continuous, and the pulse temperature rates were high from the beginning to convalescence. The affection of the kidney was catarrhal as well as that of the air passages.

The second case was that of a strong and previously healthy man, aged 40, with good family history, came to me November 10th, 1891, and stated he had been suffering from the grip for two weeks, and could get no relief. He complained of violent frontal headache and backache, pains in his knee joints, which were swelled and stiff, and his calves so tight and stiff he could scarcely walk. His stomach also he said had been disordered, so he had lost all appetite for food. He had a thickly coated, pasty tongue, pulse and temperature above normal, and his eyes looked heavy and sleepy, and the lower lids a little puffy. He said he had been passing an unusual quantity of urine, and I made him discharge some of his urine, which I found was acid, sp. gr. 1.22, and contained albumen to one-fifth, but no casts. I prescribed for him Dr. Flint's saline and chalybeate pills alternately with salol and phenacetine. Three days after, his headache and pains had nearly gone, his urine was nearly clear, and contained scarcely a trace of albumen; while his eyes were brighter, the puffiness of his lids was relieved, he had a better appetite, and was cheerful. In fifteen days all symptoms of acute albuminuria had disappeared, and he said he could not get enough to eat. The disease, however hung about his air passages for some two weeks later, giving him a troublesome tracheal cough, hard to relieve, but which yielded, and in the course of six weeks he considered himself, and he was a well man again, and better able to resume his work.

In this case I am not able to say whether the albuminuria started concomitantly with the early symptoms are not, nor am I able to say certainly that the early symptoms were those of the grip. He so stated, and I regarded the condition in which I found him only a sequel to the disease. He came to me on account of his violent headache, which he said had not ceased since the chill and fever he had in the

beginning of the attack, and the early symptoms show it to have been an acute attack.

The third case was that of a female aged 23, not of especial neurotic temperament, always regular; good family history, was taken during the height of the epidemic in January, 1891 with a rigor, followed by fever of high grade, sore throat, pain in back and limbs, and also a sharp neuralgic pain referred to the left ovary. The ovarian pain becoming excruciating, I was sent for, when I found the ovarian region extremely tender on pressure; she could hardly bear my hand or the weight of the bed clothes. She had a temperature of 103° , and pulse 110; she was much of the time in a muttering delirium condition, crying out with the pain in the intervals. Hot fomentations, combined with opium over the painful spot, with full doses of antifebrin, quieted her and the pain, and reduced the pulse and temperature—the former to 100, and the latter to 101.5° in twenty-four hours. She was continuously, however, in a muttering delirium, slept little or none, and fears were entertained that it might result in serious brain disaster or acute mania. She was given a full dose of sulphonal, and repeated until sleep was produced, which continued, with slight interruptions, for twenty-four hours, when it was found her temperature was down to 99° , and pulse 90, and though a little dazed, she was quite herself again; and she went on from that period to complete recovery—succeeding daily observations being quite uneventful until convalescence set in.

This also is one of those anomalous cases which is hard to decipher. Taking the early symptoms as a guide, I cannot see how otherwise we can do than place this case also in the same category as the uncomplicated, though the most prominent symptoms—ovarian neuralgia and brain trouble—overshadowed all the rest.

It is quite worth while to record the peculiarities of the epidemic influenza, which has been so universal in its march across the country, and the different phases in which it has appeared. I suppose every one has observed something remarkable, and some have seen features in its course not observed or noted by others. Some of these various abnormal conditions, and deviations from the usual course in the

disease, are unique, and will be available in the future for its correct definition, and for the completion of its history, which, though studied diligently and with as much thoroughness as perhaps any disease, is not, at the present time, as well understood as might be, or in proportion to the vast material offered for investigation. No excuse is necessary, therefore, for those who dot down their experiences and views of the subject, for it is for the good of the whole, and will eventuate in a fund of information which will be of signal use in future epidemics.

The peculiarities of which I speak are not confined to either or any particular aspect of the disease; for while those suffering from a preponderance of the nervous element may have, in addition, or following it, an apoplectic seizure, or a more or less complete paraplegia, or a facial paralysis, or have suicidal tendencies; and those suffering from the gastric variety may have in complication an acute nephritis or hepatic hyperæmia and jaundice, or endometritis or parametritis; and those in whom the catarrhal symptoms are most prominent may have combined, spasmodic asthma—the status asthmaticus that complicated the case of Dr. Morel Mackenzie, who recently died in London—parenchymatous tonsillitis or orchitis—the three conditions may be so combined or united as to represent in the same case each feature in a prominent degree, and cause such deviation in the regular course of the disease as to be truly anomalous. Or one phase may run rapidly into the other, beginning more frequently in the catarrhal variety, continuing as the gastric, and ending in the nervous. The nervous element is exhibited in all cases to a greater or less degree. Indeed, it is said to be a true bulbar disease *sui generis*, in which the central nervous system is principally or mainly affected, particularly the medulla oblongata. All pains, which are mostly of a neuralgic character, are referred to this primary lesion of the nervous system, in which the poisonous effects of ptomaines, rather than the infecting bacillus, play the most important part.

It is, however, to a great extent, an elective disease, and

tends, from the initiative stage, towards those points of the system which are most susceptible. As Dr. Moore, of Dublin, says: "It seems to have the property of picking out the weak points in an individual's constitution. If the patient is neurotic, nervous and neuralgic symptoms are likely. Any old tendency to catarrh of either the respiratory or gastric mucous membrane is intensified in the presence or in the wake of influenza." That is to say, we find in those predisposed to catarrhal affections, having a decided catarrhal tendency, and subject to frequent attacks of diseases of the air-passages, that it is apt to spend its force upon those parts, causing a dangerous bronchitis, or broncho-pneumonia, a distressing asthma, or collapse of the air-cells; in those of a rheumatic diathesis, the joint symptoms are seen to be more developed, causing serious arthritis, stiffness, or decided immobility; in those who suffer attacks of gastric disturbance, the disease is invited to the alimentary tract—to the stomach and bowels, producing violent gastralgia, or enteralgia vomiting, and diarrhœa; and in all cases there is more or less embarrassment to some adjacent or distant organ, in proportion to its susceptibility and previously impaired condition.

The range of the disease being so great, it must be seen how diversified the treatment must be, and yet the antipyretic, or anti-microbial treatment appears to meet all the indications, and must be given at some time, whatever the complication.

1523 *K Street N. W.*

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page 28, this issue.)

Peacock's Bromides in an Epileptic Case of long standing was used by Dr. J. G. Wallace, of Dade City, Fla., with excellent results, the intervals between the attacks having been greatly lengthened and their violence much lessened.

Clinical Reports.

Embolism of Femoral Artery Complicating Typhoid Fever—Gangrene—Death.

By W. R. CUSHING, M. D., of Dublin, Va.

I regret very much that accurate notes of this rare condition were not taken at the time, and that I am consequently obliged to write from memory. My recollection of the main facts is clear, but many minor points that would probably be of interest will be brought out with difficulty, and perhaps some passed over altogether.

The case, occurring in February, 1891, and death resulting late in April, was that of a young colored woman about 28 years of age. Her husband had been ill for several weeks with typhoid fever, and she had been his nurse. The case with her seemed to be rather mild in type—the continued fever, day after day, loss of appetite, and prostration, being the main features. There was a constipated tendency most of the time, and but little, if any, tympanites. There was nothing that demanded special attention until about the second or third week, when her mother told me that since the day before her left leg had been very painful, and it was then cold and clammy. That morning I found there was unusual depression, especially of circulation; a slow, weak pulse, and subnormal temperature. As regards the leg, it was cold and pulseless. The pulse could be felt in the groin, but none below the origin of the profunda, as nearly as I could locate it. After-history showed conclusively that the obstruction occurred at that point, entirely occluding the main femoral, and partially closing the profunda. Of course I applied artificial heat, gave musk, morphia, etc., but there was no re-action whatever in the limb; collateral circulation was not sufficient to sustain the parts at all below the knee. As a result, gangrene followed; a line of demarcation formed posteriorly a little above the knee-joint, and anteriorly extending almost to the upper third of the thigh. It ran its regular course; sloughing finally took place, and after nearly two months (at least six weeks) a diarrhœa set in, and she died of exhaustion.

This case has several features of marked interest—

1st. *The wonderful vitality* of the woman. The notes I

have show that my first visit was made February 12th, and the last April 21st. A woman of slight build, broken down with nursing, exhausted by a fever of over two weeks' duration, undergoing a complication like this, and yet living two months. At one time, indeed, she seemed to be gaining in strength, and we hoped it might be possible to remove the limb and save her life. All symptoms of the original trouble passed away long before her death, but the prostration was too great to warrant interference.

2nd. *The cause.*—We know the causes of embolism are many and varied, but in this case there was nothing discoverable to explain it positively. Careful examination revealed no heart trouble, nor had there been, up to this obstruction, anything to call attention to the limb. My own view was that the sluggish circulation, indicated by the subnormal temperature and slow pulse-rate, allowed a sufficient deposit of fibrin to take place at the bifurcation of the femoral artery to act as a nucleus.

Whether that would be possible, however, without local inflammatory trouble, I do not know, as the relation existing between the blood and blood-vessels would ordinarily render such an idea preposterous. Gross, in this connection, says: "As a result of acute arteritis, the inner membrane of the vessel loses its smoothness and polish, and becomes rough and fleecy in its appearance, making a favorable surface for the deposit of fibrin, thus closing up its calibre."

Flint says that "retardation of circulation, and a lesion of the vessel at the seat of the thrombosis, are essential to the formation of a clot at any special site;" and he also says: "Thrombosis, arising chiefly from feebleness of the heart's action, very rarely, if ever, occurs in arteries."

In this case, it is difficult to distinguish between the two conditions, *embolus* and *thrombus* of the artery, as the effect would have been the same in either case; but it is to be remembered that there was nothing to call attention to the limb or the course of the artery before the onset of pain,

followed almost immediately by stoppage of the circulation.

3rd. *Its rarity*.—A glance at the history of this case will indicate that such a condition is of extremely rare occurrence. Experience and observation for years, together with careful reading of the journals and search of the authorities, show that it is a complication almost unknown to the profession. Typhoid fever is a disease in which there would seem to be no possibility of such an occurrence—I mean particularly in so large a vessel as the femoral artery. We all know that the tendency in this fever is to hæmorrhage, not to coagulation or deposit of clot.

Flint says: "The fibrin of the blood is diminished in this as in most essential fevers, when not complicated with an acute inflammation."

Again: "When death occurs purely from the fever, the blood is often unusually dark and liquid."

Loomis says: "The blood coagulates imperfectly as soon as the disease is fully established. In intestinal hæmorrhage, the blood is usually fluid, rarely clotted."

Flint, Loomis, and Ziemssen's *Cyclopædia* make no mention of such a complication. Loomis, referring to capillary bronchitis complicating typhoid fever, says: "Sometimes infarction of the lungs occurs, resulting from embolisms in some of the branches of the pulmonary artery, due to fragments of clots which have formed in the right side of the heart the result of cardiac weakness, and often lead to 'gangrene of lung,'" thus implying its possibility.

Gross makes a statement as follows, somewhat more to the point: "Gangrene from an embolism sometimes arises during the progress of typhoid and other fevers." He mentions two cases as having been reported to him. One—that of a boy twelve years of age, who was convalescing from typhoid. Of the other no particulars are given, simply being spoken of as a similar case, whether it was typhoid, or some "*other fever*," not being stated. The obstruction occurred at the bifurcation of the popliteal artery, and gan-

grene appeared along the course of the anterior tibial artery to within four inches of the knee. There is no history given as to the former condition or health of the boy, and no statement as to presence or absence of valvular disease of the heart; and besides, it occurred with him during convalescence. There is consequently but little, if any, light thrown upon this case by those mentioned by him.

In an old edition of Watson, I find mention of a case reported to him as having occurred in France, in which there was gangrene of both extremities above the knee, due to occlusion of the arteries. The condition of the patient was so bad that the physician decided not to interfere. He waited until sloughing took place, and then cut through the bones, and the man finally recovered. The account does not state distinctly whether it occurred in typhoid or typhus, as both were treated of together in that work.

As regards Treatment.—Gross says of arterial occlusion in general: "Amputation is seldom proper, especially in chronic cases, even when a distinct line of demarcation exists, experience having shown that unless the patient possesses uncommon constitutional vigor the operation generally proves fatal. Now and then, there is, of course, an exception, but death is unquestionably the rule. In the acute form of the affection, amputation sometimes succeeds in saving life, provided there is a well-formed line between the dead and living structures and perfect exemption from internal complications."

As stated above, the general condition of this patient was such as to preclude the possibility of a successful issue to an operation. In addition to this, a deep, sloughing bed-sore formed on the buttock in the apparently healthy tissue, so there was good reason to believe the flaps would not be properly nourished. The case was accordingly allowed to run its course, with the understanding that the necessary steps would be taken should sufficient improvement occur.

Case of Dermoid Cyst in a Male.

By JOSEPH EASTMAN, M. D., LL. D., of Indianapolis, Ind.

The following case of dermoid cyst in a male I consider worthy of record:

On the 15th of September last, I was consulted by Dr. W. E. Barnum, of Manilla, Ind., in regard to Mr. W—, age 33, married and the father of three children. The patient's appearance was one of extreme emaciation and weakness. He had the cachexia of cancer. He gave a history of severe lancinating pains in the right iliac region, where, on examination, I found a large mass, apparently involving the cæcum. I pronounced the trouble either cancer of the cæcum or of the meso-cæcum; and as the tumor was firmly fixed, I advised against operative interference.

Some two weeks later, I received a letter from Dr. Barnum, in which he stated that Mr. W. was passing bones per rectum, which, to all appearances, were those of a human skeleton, but very small. He had been passing some hard substances at stool for a week before he noticed what the hard substances were. Dr. B. requested me to come to Manilla prepared to perform an exploratory laparotomy, which I did.

Assisted by Drs. Barnum and Jenkins, of Shelbyville, I opened the abdominal cavity, and found involving the cæcum a sac two-thirds as large as a human head, originating, as I think, from the spermatic cord. On puncture of the sac, the walls of which were an inch thick and seemingly malignant, a quantity of pus, together with a number of bones, poured out. There was an opening from the sac into the bowel.

The bones represented the various parts of a human skeleton—scapula, clavicle, numerous phalanges, etc. The ossa innominata were particularly well formed.

The edges of the sac were stitched to the abdominal wall; drainage was secured by means of antiseptic gauze, packed in the sac, and the wound closed.

The man lived twelve days, dying, as Dr. Barnum informs me, of inanition.

No post mortem was held.

Cases of dermoid cysts in the male have been reported in this country by Dr. Edward B. Gaither, of Springfield, Ky., in the *New York Medical Repository*, 1810, and by Dr. S. W. R. Tilamis, in the *Virginia Medical and Surgical Journal*, in 1855.

Correspondence.

Some "Advances" that are Not Advances, and Some that Are.

Mr. Editor :—I know you will pardon me for my long silence, when I assure you that for several years I have been making a desperate effort to keep up with all the new things in our profession. This effort, together with my regular duties as a physician, have kept me so constantly employed, that I have not had a moment to spare, but at last I am "brought to a log," and I fear have hardly strength enough to relate to you some of the perplexities and "sorrows of a poor old man."

Well, to begin, I was very much interested in Pasteur's discovery—not from any selfish or personal motives, but purely from a scientific standpoint, and because I hoped for some lasting benefit to suffering humanity. This you will readily acknowledge as true, when I assure you that I have already had five or six attacks of hydrophobia; in fact, that I always do have such an attack whenever I am out of sight of land; and some of my Eastern friends can testify, that they have seen me seriously threatened with such seizures when I was not out of sight of land.

But the point I wish to make is this: After so long a time has elapsed, I find medical opinion still so much divided in regard to the efficacy of these inoculations, that, if I am ever bitten by a rabid dog, I shall not know which most to rely upon, Pasteur's rabbit juice, or the mad-stone. The best authorities tell us that it certainly does work with dogs, cats, and guinea pigs, but as I am neither of these, I am still in a quandary about it, and I hope Pasteur will pardon me for saying so.

Again, when our dear, good old friend Brown-Sequard was riding his ram around so exuberantly, like most of the "old guard" of our profession, I was immensely—No! no! excuse me, *not immensely*, but strict candor compels me to say that I was at least measurably—interested, and I

fondly trusted that a more than Jenner had appeared. The truth is, I was so much elated, that upon the strength of it I ordered a bottle of the "elixir," bought me a new suit, beaver hat, spike-tailed coat, etc., and was about to join a company of young bucks who were "painting the town red," when all of a sudden, and without the least warning, I heard that the "rejuvenater" had played out—fallen like Lucifer to rise no more. "Oh, what a fall was there, my countrymen!" Thomas Moore must have had a presentiment of this very occasion when he penned those touching words:

"Oh ever thus from childhood's hour,
I have seen my fondest hopes decay."

Nevertheless, in spite of the sad disappointment, I for one say *three cheers* for Brown-Sequard, because he did the best he could for the old folks!

"Who does the best his circumstance allows,
Does well, acts nobly—angels could do no more."

I had not fully rallied from the shock of this great blow, when there came from the land of science and sauerkraut, the glorious announcement that Koch had at last "got the dead wood" on the micro-organisms, and, of course, I was up in the clouds again, yet my hilarity was a little more tempered with moderation; but, alas! "how oft do human hopes deceive us," for now but few of us have any confidence in tuberculin.

Still there must be some truth in bacteriology, since for long years I have not seen a journal that was not filled with matter relating to germs, vibriones, ptomaines, micro-organisms, germicides, asepsis, antiseptis, etc.; and I have studied the subject until I have gotten to the bottom of it, or it has got to the bottom of me, I don't know exactly which.

Beginning with the amœba and olynthus, I came on up to a small sealed casket labeled spore of a bacterium, which had been dead and frozen up in the Arctic regions ten thousand years, but when it was given air, moisture, warmth, and organic matter to feed upon, it came to life again, and soon

became the happy mother and father of a numerous progeny of infant bacteria.

I have seen too the micro-coccus, strepto-coccus, bacillus, bacillus prodigiosus, staphylo-coccus, pneumo-coccus, "*et id genus omne*" of cocci too numerous to mention. These germs they say are in the air we breathe, in the water we drink, and in the food we eat—in truth, upon everything we see, taste, smell, hear, or feel; and what is worse than all, a large percentage of them are as venomous as a tarantula, a rattlesnake, or a cobra-de-capello. So poisonous are they, that many in the van of our profession insist upon it, that the obstetrician now must sterilize himself and sterilize the woman before he comes in ten feet of the bed, and that he must so educate the *tactus eruditus*, as to be able to determine all the differences of presentation and position through the abdominal parietes, and that he must not conduct even such examinations until after thorough application of soap and water, ether, and bichloride of mercury to his hands.

Now, the thought comes to me right here, that all this trouble about the obstetric women, will soon become a work of supererogation, if we only give our friends Battey, Tait, and others a little longer time.

Solomon says, "Much study is a weariness of the flesh." I can't say about that, but I do know that I have studied this subject until I am almost frightened to death. I am afraid to take a long breath, afraid to eat or drink, afraid of everything above, beneath, or around me; in fact, afraid of everything outside or inside of me. I keep my nose and ears stopped up with cotton, burn sulphur, tar, and old shoe leather constantly upon my hearthstone; sop Platt's chlorides and Labarraque's solution instead of "gravy on my taters," and use bichloride solution and other germicides in everything I drink; yet in spite of it all, I believe I have swallowed the spore of a pathogenic bacterium, because I can feel things galloping up and down my primæ viæ and my chylopoietic viscera as big as swamp ponies, and anthelmintics are of no avail.

It will not surprise you, then, to learn that I am emaciated to a skeleton. My chest walls have sunken in for want of fresh air, and my abdomen, which was once rotund and gloriously protuberant, has "vanished like dew before the morning's sun," and its lank wall flaps upon my backbone like the curtains of a tent against its side-poles "upon a raw and gusty day."

How can an old man stand all these new ideas and new practices? I fear I cannot long survive them; but I sit and revisit in imagination other days, those halcyon days of yore, when my young heart sported in all the gladness of youth's sunny hours, without any special care, or—or—any fear of "the bugs."

Yours in much tribulation,

R. L. PAYNE, M. D.

Lexington, N. C., Feb. 2nd, 1892.

Treatment of Influenza.

Mr. Editor:—I have been disappointed in my examination of the current literature, not to find the record of experiences similar to my own in the treatment of the prevailing epidemic of "la grippe" or influenza.

The present epidemic has been in this country for two or three years, and yet the mortality and sequelæ are as numerous as two years ago. The symptoms of the disease are well enough understood not to require enumeration.

My opinion as to the most successful treatment, based upon therapeutic and pathological data, has been formed from an experience with one hundred and fifty to two hundred cases, without, as yet, a death, or even any undesirable results.

The attack of influenza is usually ushered in by chills, which follow each other in rapid succession; the temperature rises to 104° to 106° F., accompanied with severe pain in the head, back, and limbs; eyes congested and burning.

The cough at first is dry and tight; later on it becomes looser, but is still exhausting; bowels generally constipated; tongue heavily coated with white fur; skin dry and hot.

In this condition, many of the profession would give antipyrin to lower the temperature and relieve the pain; but the system is already in a depressed condition, and if you give antipyrin enough to lower the temperature, you will depress the heart and endanger the life of your patient.

My treatment has been about this (and I give it for the benefit of the younger members of our profession.) On my first visit I order the following:

R_x.—Pulv. doveri.

Quinæ. sulph.....āā ℥ij

Hydrarg. chloridi mit.....gr. xij

M.—Make four powder.

Signa.—Take one at noon and night. Or the powders may be made to contain each—

R_x.—Pulv. doveri.

Quinæ. sulph.....āā gr. viij

Hydrarg. chloridi mit..... gr. ij—M.

Repeat every four hours, using two teaspoonfuls or so of "Charlottesville" or "Hoetop" grape brandy in as much water as a vehicle. As a stimulant, this wine has no superior in this country, whether it be a domestic or an imported wine. In addition to the above, I use a cough mixture made by the following formula (given me by Dr. R. S. Lewis.)

R_x.—Pix liquidæ.

Alcohol.....āā f℥ss

Tinct. opii. camphor.

Spts. ether nitrosiāā f℥ss

Syrup. senegæ.....f℥j

Syrup. pruni virginianis.....f℥iv

M. Sig.—One desertspoonful every four hours.

After this, the temperature is safely lowered; the chills stop on account of the quinia sulph.; the pain ceases, secretions return on account of the combined action of quinia sulph., and pulv. doveri; the calomel restores the liver to its normal condition; and with the help of a single dose of

castor oil on the second day, we find our patient at the end of forty-eight hours in a safe, and with the exception of a cough, in a comfortable condition. The cough is easily cared for with the mixture referred to above, and the reason for its use is just this:

We have a fever with a broncho catarrhal complication, which at first stops all secretions. The secretion is restored by the use of pulv. doveri, as above stated, and also by the adjunct action of the solution of tar in alcohol, and tinct. opii camphor. This bronchial irritation causes a nervous, unsatisfied cough, which is relieved by the stimulating expectorant effect of the syrups of senega and wild cherry, associated with the paragoric. The action of both the heart and kidneys is impaired; thus the stimulating action of syrup of wild cherry and the spirits of ætheris nitrosi is needed.

Diet in these cases should be light and easily digestible in character, and generous in quality.

The difficulty with most of our young physicians is a too close attachment to hand-books and compends, instead of standard works and bedside study of patients. The statement is made, that such and such an advertised remedy has such effect, but the difference is not marked between the relief of a symptom, and the cure of a disease.

E. H. LEWIS, M. D.

Gordonsville, Va., Feb. 6th, 1892.

Mellier's Tongaline for Recurring Grippe—Dr. I. N. Love, in a recent number of the *Medical Mirror*, remarks that the history of epidemics, like diphtheria, influenza, etc., is almost uniform in their extending over several years. He thinks it probable that the "grippe" and its serious effects will develop enormous numbers of troubles this spring, unless the systems of the people are protected against its attacks. No remedy more promptly suggests itself than Mellier's Tongaline.

Foreign Correspondence,

Anæsthetics in London—Mode of Administration—Chloroform Inhaler - Ether.

Mr. Editor,—Anæsthesia is giving more anxiety to the surgeons of London at this period than any microbe that has ever existed. The selection of a safe and convenient agent and suitable apparatus for administration in so large a medical centre must necessarily have varied ideas as to agents and modes of administration. This is a subject of very great importance to every one, and the ideas and views, together with the description of the generally used apparatus in the largest medical centre in the world, must necessarily be read with much concern.

Chloroform, notwithstanding some consider it occasionally producing death, must ever be the most popular anæsthetic. Its rapidity of action, non-nauseating effect, non-inflammability (in comparison with ether), and the small quantity necessary to carry, are combined effects not to be obtained by any other vapor—not to mention its non-irritant effect on the air-passages.

Ether comes next in importance, and has its advocates and admirers; it is largely used here.

In reference to chloroform administration—the Hyderabad Chloroform Commission, consisting of eminently qualified gentlemen to conduct an investigation, and bringing a large and varied experience to assist, sparing neither time, money, nor painstaking in the investigation, deliberately arrived at the following conclusions:—(Condensed). 1st, That chloroform causing death is always the result of an overdose. 2nd, That sudden stoppage of the heart is not caused by chloroform. 3rd, That chloroform syncope does not exist, and that in death from an overdose of chloroform respiration always fails prior to circulation. 4th, That the heart is the last organ to give in under the action of chloroform. 5th, That its administration is safe if breathing is regular throughout, and inhalation stopped when the patient is fully

under the influence of the vapor. Therefore, the most important point to watch is the respiration, and any apparatus best facilitating the measuring of the exact quantity of chloroform administered, diluting the vapor with sufficient quantity of fresh air, and affording a ready and safe means of judging of the state of the respiration, and allowing of slow or rapid administration of vapor, must commend itself to all who are inclined to the Commission's views.

I shall here make mention only of the fact that its administration by a towel folded to form a cone or cup, or else a handkerchief thrown over the face and chloroform dropped on it, is seldom ever to be seen, having been superseded by more rational modes. I say rational, because a mode, neither admitting of a correct estimate as to amount used, nor knowledge as to amount of atmospheric dilution—not to mention the chief objection as to not affording a means of recognizing the state of respiration—is irrational and unsafe.

The difficulties are overcome, and the objects of the Hyderabad Commission's report attained most perfectly, by the ingenious contrivance manufactured by Messrs. Krohne & Lissman, of London, by whose kindness I have been able to furnish the wood cut (Fig. 1) descriptive below.

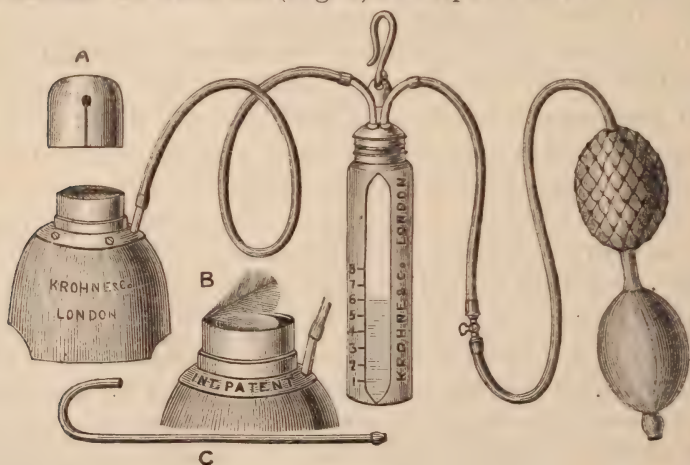


FIG. 1.

It is a modification of the Junker inhaler for chloroform and methylene—which (Junker) inhaler has been exceedingly popular here for many years; also I produce the Hyderabad inhaler with a modification (Fig. 2).

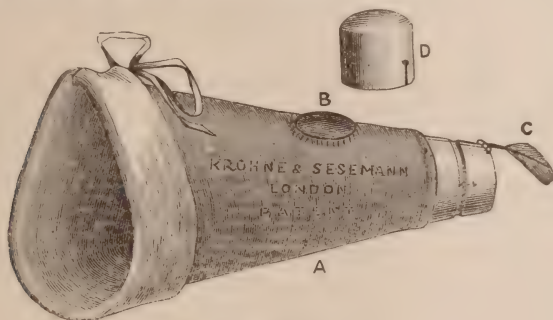


FIG. 2.

Fig. 1 will be noticed as having an 8-drachms graduated bottle for the chloroform, with a hook at top for attaching to button-hole of vest. Into the top is tightly fitted and screwed down a silver tube. The mask B for covering the face and nose is attached to one flexible tube, and the double air-bulbs by the stop-cock to the other. This stop-cock is for regulating the amount of air passing through the tube, administering a large or small stream of vapor, at the will of the operator. One compression of the bulb sends one minim of chloroform vaporized (not spray) through the tube to the mask B, making one cubic inch of chloroform vapor to 33 cubic inches of atmospheric air—3 per cent. of chloroform vapor—which enters the lungs, rendering asphyxia impossible with ordinary dexterity. A small quantity of fresh air enters the bulb, and passes to mask; then at top of mask is a cap on which is placed a feather (movable on slightest breath) as a respiration indicator. Through this, you are kept perfectly posted as to breathing. Through this orifice in the mask the patient is supplied with all the pure fresh air he needs, and the fast or slow compression of the bulb increases or diminishes the anæsthesia. The respiration indicator communicates accurately the slightest irregu-

larity of breathing, and allows of no deception as to spasmodic upheavals of chest or diaphragm, and is a great triumph.

The tube C is used in place of the mask for operations on the mouth and face after the patient has been anæsthetized by mask.

Dr. Robt. Bell, who uses it extensively, says one drachm of chloroform produced and maintained anæsthesia ten minutes; Dr. Gubb 3iiss to 3iiss, from thirty minutes to one hour. This system is used by hospitals favoring chloroform, some of which are Samaritan and Middlesex.

Among the noted surgeons who use, it may be mentioned Sir Spencer Wells, George Granville Bantock, Mr. Meredith, Mr. Alban Doran, and Robert Belle, are only a few among hundreds.

Fig. 2 represents the inhaler recommended by the Hyderabad commission (showing the respiration indicator formerly spoken of added), which consists of a cone or funnel (made to replace rubber in hot climates), and at B is seen an aperture for administering the chloroform through. This is not generally used, having been almost entirely superseded by the Fig. 1. Methyline is rarely used, and when so, it is used very much as the chloroform.

Ether is largely used here. It has its advocates from the belief that it is less dangerous, but in abdominal operations it must be admitted it has many disadvantages; hence its unpopularity with gynæcologists who have thoroughly tried both chloroform and ether. It is given with Clover's inhaler, or some of its modifications. Clover's consists of a mask (at bottom of which is a tube with stop-cock for furnishing fresh air), and connected by a short tube to a cup-shaped receptacle, through an opening in the top of which (receptacle) the ether is introduced. This again communicates by a large metal tube to an elastic bag. This bag is inflated from aperture in top of receptacle, and cap placed on and into this elastic bag; the patient breathes until she is anæsthetized. From time to time the bag is refilled with fresh air.

This system is used partly at the Soho Hospital, and at King's College.

At St. Peter's, Mr. Woodhouse Braim, anæsthetizer for Sir Reginald Harrison, Mr. Farnwick, and Mr. Edwards, uses nitrous oxide gas in the first place, following after with ether. He uses a very large bag filled with gas, and an exceedingly large tube leading from it to the mask. He claims an advantage over other methods with the large tube, but he changes masks on changing from gas to ether—an obstacle overcome by a modification of the Clover's apparatus by connecting the tube from the gas to mask, having the mask formerly charged with ether and a stop cock for shutting off gas when desired. Cocaine I have not seen used to any extent in London. The last mentioned system of administering gas and ether is used at St. Mark's Hospital, partly at Soho, and at many others.

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Proceedings of Societies, Boards, etc.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

[LLEWELLYN ELIOT, M. D., Secretary, Washington, D. C.]

January 11th, 1892. Discussion of Dr. Walsh's paper (see page 1001) on—

Prolonged Lactation, and Some of its Effects.

Dr. W. P. Carr said that Dr. Walsh has given an interesting review of the evils resulting from prolonged lactation. Our text books certainly do not emphasize the subject; but they save themselves by stating the fact, that prolonged lactation causes anæmia, and that really covers the whole ground. All the symptoms are readily explained as symptoms of general or local anæmia. As soon as the blood becomes impoverished by the long-continued drain, the most highly organized system—the nervous system—begins

to suffer. Anæmia of the brain produces headache, mental inertia, and depression, which if carried to an extreme, results in melancholia. Anæmia of the cord, produces general muscular weakness, neuralgias, and relaxation of tissues. We are all familiar with the relaxed condition of the vagina and pelvic tissues of anæmic women, and with the uterine displacements and catarrhs that follow as a natural sequence. Again, anæmia of the centres of secretory nerves, causes a diminished flow of gastric and pancreatic fluids, causing atonic dyspepsia, which establishes a vicious circle, and increases the anæmia by mal-nutrition. Anæmia of the vaso-motor centres produces a weak and irritable condition of the vaso-motor nerves; so that slight local irritation produces great local congestions, often resulting in transudation of serum into the tissues. Vaso-motor paralysis and long-continued dilatation of the vessels in the breast itself, tends to produce permanent enlargement of the vessels, making it difficult to check the secretion of the gland. Changes in the gland cells may occur, and are certainly favored by the hyperæmia. If uterine displacement or catarrh occurs, another vicious circle is established, for uterine irritation undoubtedly causes reflex hyperæmia of the breast and increases the dyspepsia. Atony of the intestine, with constipation and flatulence, absorption of intestinal gasses and poisons, alterations in the urine from poor oxygenation, vesical catarrh, and a host of other evils are liable to occur and add directly or indirectly to the causes that increase the anæmia. Nor is this all. In anæmia, the blood serum loses in antiseptic properties, and the cells of the body become less able to resist the attacks of bacteria; consequently the patient is in danger of contracting any one of the many local or general, infectious, contagious, or paludal diseases. Thus anæmia really covers the whole ground; but I agree with Dr. Walsh, that the subject should be given more space in our text-books.

Until recently, the *treatment* has been erroneous. The most important object of treatment, is rest of the gland, and all rubbing, pumping, application of liniments, etc., are to be avoided, as such measures increase the irritation, and prolong the lactation. Wash the breast thoroughly with a bichloride solution, apply a thin layer of sterilized cotton, cover with a compress of bichloride gauze and a firm bandage. Then leave the breast untouched for a week, without fear of abscess, or of bad odor from decomposition of the leaking milk. If the breast becomes tense and painful, do

not pump it, but give an active saline purge. This usually relieves the tension and pain promptly. Otherwise the alternate use of purgatives and of morphia and atropia should be continued until the pain ceases, as it always will in a few days. Hard lumps need give no uneasiness, if the breast is made aseptic. They will absorb. The bandage and compress support the breast, give it rest, and produce local anæmia by pressure. Filling of the gland with milk also drives out the blood, and is a conservative process. Iodide of potassium, belladonna, camphor, etc., are of doubtful efficacy and may do harm. Bromides may be useful in lessening reflex irritation.

Dr. L. Eliot said that there is a popular fallacy among women that as long as they are nursing a baby there is no danger of their becoming pregnant; and this is one of the principal causes of the anæmia which so often is seen in nursing women after the period of weaning has passed. We must combat this belief, and assure our patients that breast-milk, after the tenth month, contains no more nourishment for the baby than does beef-tea for the ordinary uses of the sick room. He was sorry Dr. Walsh had not said something as to the composition of the milk, both during the term of normal lactation, and during the term of abnormal lactation, for this would have a very important bearing upon the study of the subject under consideration. Dr. Eliot had seen a case where lactation had been prolonged to the twenty-fourth month, in the hope of escaping pregnancy; the woman was anæmic to the highest degree, a perfect neurasthenic, with dysmenorrhœa, constipation, loss of appetite, a curse to herself, and a nuisance to her friends; her baby had a mouthful of teeth, and ate everything he could get. After the cause of the anæmia was removed, the woman, through the use of tonics and good diet, in time became useful to her family, and became pregnant.

Bromidia.—Dr. Joseph G. Ross, Professor of Clinical Medicine and Diseases of the Chest in Rush Medical College, has prescribed bromidia frequently during the past three years in insomnia without pain, in delirium of acute fevers, in delirium tremens, puerperal mania, and has found it invaluable.

Analyses, Selections, etc.

Extraction of Arms Extended Over Head in Breech Labor.

Dr. Robert L. Dickinson, Lecturer on Obstetrics, etc., Long Island College Hospital, says (*N. Y. Jour. Gynæc. and Obstet.*, Feb. 1892):

We dare not waste time with half-way measures during the few minutes which determine the life or death of the child after the birth of the lower part of the trunk. With a relatively large fœtus or a relatively small pelvis, the trunk partly delivered, the arms stretched upward, the elbows below the inlet, and the head extended, the key to the situation lies in fetching the elbows below the brim. Once drawn into the cavity of the pelvis, the elbow is readily brought out.

The text-books imply that traction on the body will always draw the elbow of an extended arm into the pelvic cavity within reach. This I deny. If the elbow is not below the brim, and a hand is slipped beneath the child into the vagina, and a finger hooked over the humerus, that bone is supported at one end by the shoulder joint, and at the other by the pelvic brim, and traction will break the bone before the arm can be liberated.

To overcome the difficulty, Winckel recommends shoving the body upward, seizure of the trunk with both hands, and rotation of the body, carry the elbow backward into that sacro-iliac space opposite to that which is occupied by the forehead. Failing in this, he advises a more extensive rotation. Then he slips a whole hand into the pelvis alongside of the child's body and seizes the arm. In his illustration, the hand goes past the brim to clutch the elbow, so as to sweep the first arm across the face of the child.

In a remarkable new book by Faraboeuf and Varnier on "Accouchements," the operator is directed to pass the whole hand below the child along the sacral concavity, so that the wrist goes into the vulva, and the fingers reach above the brim to seize the arm.

Barnes warns us of the danger of great rotation of the body, because if the head fails to turn also and the chin points toward the acromion or further back, laceration of the ligaments of the atlo-axoid articulation and of the spinal cord is likely to occur. He also warns us against undue compression of the thorax as dangerous to the child.

He counsels the anterior reach—namely, that part of the hand be passed above the child and under the pubic arch.

The method that has succeeded in a considerable number of cases in my hands, after failure of other methods, has been the following:

1. Twist the child's body so that the shoulder lying nearest the sacrum is carried towards the sacrum.

2. Draw the legs and trunk sharply toward the opposite side and somewhat forward until the scapula is felt. This drags the elbow down near the brim.

3. Slip in two fingers (or the flat hand) well forward under the pubic arch and reach along the child's humerus to the elbow.

4. Push the arm across the face, and then sweep it down to the chest and across it, and out of the vulva.

5. Rotate the body to bring the remaining shoulder back toward the sacrum, and the liberated arm under the symphysis.

6. Slip the fingers of the other hand under the pubic arch and along the child's arm, and attempt to sweep the elbow past the face.

6a. *At the same time the other hand, on the suprapubic region must push the occiput in the opposite direction, so that the head turns on the neck, and elbow and face go over together.*

This last manœuvre is the one to which I wish to draw attention, as all the other steps are well-recognized methods. The arm "jams" between the projecting face and the projecting promontory unless the external assistance is employed. The greater the force used to push the elbow across the face, the greater is the resistance unless such external assistance is called into play.

Antikamnia—Opposed to Pain.

Our attention has been frequently called during the past year to the claims made by the progenitors of antikamnia, and as a result, after careful investigation, we submit the following as a compendium of an examination of its pathological and physiological action:

The therapeutic properties are—antipyretic, antithermic, analgesic, and anodyne. Klemmer, of Germany, makes a distinction between antipyretics and antithermics. He says, "Antithermics act only on the temperature—that is, they influence its reduction; while antipyretics influence the *cause* of the high temperature.

Fever is an acute derangement of all functions, the most

important of which are acceleration of the heart's beat and disturbance of the circulation; nervous disturbance; elevation of the bodily temperature; disturbance of nutrition, including secretion.

These four groups of symptoms may have one or two relations. One condition may be the cause of the other, or they may all be simply the result of a common cause. The nervous disturbances of fever may be summed up as a paresis or convulsions, stupor, coma, or delirium.

Jurgenson has found that there is a regular diurnal variation of temperature in health, precisely similar to that which is known to occur in fever; thus, the 24 hours are, as far as human temperature is concerned, divided into a diurnal and nocturnal period.

Burdon Sanderson says: "The only material difference between the conditions is that in fever the normal is 3.267° F. higher."

In health, there is in man a fixed mean and a normal temperature, having a regular rhythm, and this variation is beyond the control of all disturbing causes, which do not force the organism beyond the condition of health. The maintenance of the normal temperature and its rhythm is dependent upon the nervous system, which, within certain limits, controls both the production and dissipation of animal heat.

So far as our present knowledge goes, the chief factor in controlling heat dissipation is the vaso-motor nerves, including in man such nerves as control sweat secretions—these nerves being able, by contracting the capillaries of the surface of the body, and by drying the secretions of the skin, to reduce the loss of heat to a minimum, and by a reverse action to increase it to a maximum. The only nerve-centre proven to exist capable of influencing the heat production without affecting the general circulation is situated in the pons varolii, or above it; and whilst it may be a muscular vaso-motor centre, it is more probably an "inhibitory heat-centre." Of whichever nature it may be, it must act through subordinate centres situated in the spinal cord.

In fever, vaso-motor paralysis, when produced, is followed by an immediate fall of temperature. Fever is, therefore, a state in which the depressing poison or a depressing peripheral irritation, acts upon the nervous system which regulates the production and dissipation of animal heat. Owing to its depressed state, the inhibition centre does not exert its normal influence upon the system, and consequently tissue-

change goes on at a rate which results in the production of more heat than normal, and an abnormal destruction and elimination of the materials of the tissue. At the same time the vasor-motor and other heat-dissipating centres are so benumbed that they are not called into action by their normal stimulus—elevation of the general bodily temperature, and do not provide for throwing off the animal heat until it becomes so excessive as to call into action, by its excessive stimulation, even their depressed forces. The nerve centres, in some cases, seem to be completely inhibited. Antikamnia removes the pressure by dilating the capillaries and the other vascular vessels, thus causing local congestion to disappear. It reduces the pulse-rate, thereby slowing the heart. It controls the vaso-motor nerves, besides calming the whole nervous system, and thus has a general soothing effect. It is a valuable remedy as an antithermic; its action in this regard is well-marked, sometimes reducing the temperature 2° to 3° F. in a few hours. It seems to have a better effect on the high evening temperature than upon the high diurnal temperature. An extreme degree of fever, with or without complications, is dangerous, and must be controlled. In addition to the direct subtraction of heat by cold applications, we must, with caution, have recourse to antipyretic remedies. A distinction must be drawn between fever and its pathogenic agent. Such an antipyretic as antikamnia may not act on this agent, but may have an independent action, and therefore have only a transitory effect, or it may influence this agent in the same manner that quinine does the germ of malaria or influenza.

An additional advantage gained in typhoid fever and all gastro-enteric fevers by the administration of antikamnia in moderate doses, is that the alimentary canal is rendered alkaline, and kept in an antiseptic condition, and this is a most important condition to maintain in the treatment of all fevers.

The best results are obtained with antikamnia when exhibited in small doses (usually from three to six grains), repeated at proper intervals of from two to four hours; and the most desirable vehicle is sherry wine or diluted brandy. Ten grains is an ordinary *full* adult dose. Five grains is generally enough. The five-grain tablets is an excellent form for administration every two hours or more for three or four doses.

The duration of the effect of antikamnia is longer than that produced by any of the other coal-tar derivatives. It

also seems indisposed to produce sub-normal temperature, as some of the others do.

In the pyrexia produced by exposure to the rays of the sun, which is common in India and in our large cities during the summer solstice, antikamnia, in addition to cold douches, is one of the very best of remedies. Antikamnia reduces temperature by increasing radiation of heat from the body, and diminishing heat production. It stimulates the glandular system, particularly the sudorific glands. In many cases, its action as a diaphoretic is phenomenal.

In some cases, it has marked action on the mammary glands, producing an increase in the flow of milk. Antikamnia, in readily-adapted doses, can be given to children without any ill effects, and is a reliable remedy. In pertussis, it keeps the paroxysms in check, and makes the patient more comfortable than any remedy we have. The cyanosis induced by its administration is *nil*, unless there is a peculiar idiosyncrasy, which is found sometimes, producing manifest heart disturbance. These are to be overcome by stimuli, or intravenous injections of salt. Antikamnia acts admirably in the after-pains of labor, in dysmenorrhœa, hemicrania, migraine, ordinary sick or nervous headache, in the pains of locomotor ataxia, the various neuralgias, epilepsy, and in the aching pains produced by *la grippe* and dengue. It exerts a decidedly beneficial influence in bronchial and pneumonic troubles, as well as the fever of phthisis.

It acts as an analgesic by obtunding the sensibilities of the vaso-motor and sensory nerves. It seems to tranquilize the ganglionic centres of the whole nervous system, and has but slight action on the brain. We mean by this, that it does not stupefy or produce unconsciousness. It seems to have no disturbing influence on the kidneys. It has a happy effect in nearly all neurotic troubles, and is destined to occupy a permanent position in therapeutics.

Antikamnia is of the amido-benzole series, in combination, and is much to be preferred to any other of this class of derivatives, especially when the element of pain is to be overcome.

Successful Treatment of Membranous Croup without Tracheotomy or Intubation.

Dr. John B. Turner (in a paper read Feb. 10, 1892, before Philadelphia Co. Med. Society), referred to cases of laryngitis with fibrinous exudation not complicated by diphtheria.

In nine years before February, 1891, he treated medicinally eight cases; six died—75 per cent. Tracheotomy in the practice of his friends having been so unpromising (all the patients dying), he did not see fit to try it. His intubation-experience is small—two cases, both dying. The same objections obtain in both tracheotomy and intubation—viz: accumulation of muco-pus in the lower part of the trachea and in the bronchi. Paralysis of the posterior crico-arytenoid muscles, preventing dilation of the glottis in inspiration, is no doubt relieved, but other paramount elements of danger—as pneumonia, capillary bronchitis, accumulation of muco-pus; feeble expiratory efforts preventing expectoration, due to general debility and exhaustion, are *unremedied*.

His treatment since February, 1891, is to allay inflammation about the membrane, effect separation of the membrane, lessen the formation of new membrane, effectually control laryngeal spasm, and sustain strength. Assafoetida by suppositories allays spasm and gives needed intervals of quiet, restful sleep, which is a much overlooked remedy in membranous croup. For the other symptoms he used ammonia chloride in syrupy mixture without water, as the addition of water makes it unpalatable to children.

In Wood's *Reference Hand-Book*, Dr. Nickles says: "Wibmer found a very decided increase of the bronchial mucus after hourly doses of eight to fifteen grains of ammonium chloride, and other careful observers noticed the same effect. Experiments of Rossbach seem to show a different mode of action. Under the influence of the salt, the tracheal mucous membrane became anæmic and the secretion of mucus gradually ceased. The utility of ammonium chloride in catarrh of the air-passages may therefore depend upon a favorable modification of the vascularity of the mucous membrane—not merely upon a change of the quantity of the secretion."

Rossbach's view is the more probable one regarding the action of ammonium chloride.

Dr. Turner then details the treatment pursued in his last four cases, and advocates it as simple, humane, and easily applied.

CASE I.—Feb. 16, 1891. Sallie B., aged eleven months; severe attack of membranous croup. The mother had lost two children by the same disease—one in twenty-four, and the other in thirty-six hours. Why croup has a predilection for certain families, Dr. T. does not know. Dr. Samuel

Ashhurst confirmed the diagnosis, and recommended tracheotomy which was refused by the mother.

Dr. T. then gave—

R_y.—Ammonii chlorid.....ʒj.

Syr. tolutan..... fʒij.

M.—S.—Half a teaspoonful every two hours.

R_y.—Assafoetidæ pulv.....gr. xvj.

Quininæ sulph.....gr. iv.

Codeinæ.....gr. ss.

Olei theobromæ.....gr. cxxx.

M.—Fiat suppos. viii.

S.—One every four hours.

The child did well (the attack lasting eleven days), and recovered. The patient received whiskey and milk at regular intervals, and was kept in a well-ventilated room. The appetite remained fairly good, and the strength was sustained.

The same child had another attack on December 18, 1891, and by the same treatment was restored to health. He calls this second attack Case II.

CASE III.—John D., aged eighteen months; attacked August 26th. Same treatment; recovered on eighth day. The mother poulticed this boy on chest and over trachea, of which action he approved.

CASE IV.—Harry J., aged two and a half years; attacked March 6th. Disease lasted one week. Recovered by means of same treatment. This case received larger doses of the ammonium chloride mixture because of his being older than the other children.

There was no atomization used on these cases.

Butyl-Chloral for Facial Neuralgia.

It has been claimed in the *Weiner Klinische Wochenschrift* (according to *Intern. Med. Mag.*, Feb. 1892), that butyl-chloral has been proved to have an especial action on the facial or trigeminal nerve. Given internally in doses from one to three grains, it has a marked effect in relieving painful neuralgias of this nerve. Prof. Liebreich, of Berlin, prescribes it as follows:

R_y.—Butyl chloral.....gr. xl. to lxxv.

Alcohol. rect.....fʒ iiss.

Glycerini.....fʒv.

Aquæ dest.....q. s, ad. fʒiv.

M. Sig.—From two to four teaspoonfuls p. r. n.

Editorial.

Pan-American Medical Congress in the United States of Columbia.

Pursuant to nomination by Dr. Pedro M. Ibanez, of Bogota, member of the International Executive Committee for the United States of Columbia, the following organization of the Pan-American Medical Congress has been effected in that country: *Vice-President*, Dr. Pio Rengifo, New York; *Secretaries of Sections—General Medicine*, Dr. Ignacio Gutierrez Ponce, Paris; *General Surgery*, Dr. Rafael Rocha Cassilla, Bogota; *Military Medicine and Surgery*, Dr. Abraham Aparicio, Bogota; *Obstetrics*, Dr. Joaquin Maldonado, Bogota; *Gynaecology and Abdominal Surgery*, Dr. Jose M. Buerdia, Bogota; *Therapeutics*, Dr. Manuel Plata Azuero, Guaduas; *Anatomy*, Dr. Joan D. Herrera, Bogota; *Physiology*, Dr. Antonio Bargas Vega, Bogota; *Pathology*, Dr. Nicholas Osorio, Bogota; *Diseases of Children*, Dr. Ant Yomez Calvo, Bogota; *Ophthalmology*, Dr. Proto Gomez, Bogota; *Laryngology and Rhinology*, Dr. Luis Fonnegra, Bogota; *Otology*, Dr. Carlos Esguerra, Bogota; *Dermatology*, Dr. Daniel E. Coronado, Bogota; *Orthopædics*, Dr. Juan E. Manrigue, Bogota; *Naval Hygiene and Quarantine*, Gabriel I. Castaneda, Bogota; *General Hygiene and Demography* ———; *Mental and Nervous Diseases*, Dr. Pablo Garcia Medina, Bogota; *Oral and Dental Surgery*, Dr. Guillermo Vargas Paridea, Bogota; *Medical Pedagogics*, Dr. George Vargas, Bogota; *Medical Jurisprudence*, Dr. Leoncio Barrets, Bogota. *Auxiliary Committee* (each member being the official representative of the Congress in his respective city) Dr. Nicolas Osorio, Dr. Andres Posada Arange, Dr. George E. Delgado, Dr. Eugenio de la Hoz, Dr. Domingo Cagiao, Dr. Jose Manuel Rodrigues, Dr. Paulo Emilio, Villar, Dr. Felix M. Hernandez, Dr. Rafael Calvo, Dr. N. Ribon, Dr. Milceades Castro, Dr. Cayetano Lombana, Dr. Jose M. Martinez, Dr. Isaias Saavedra, Dr. Severo Forres, Dr. N. Villa, Dr. Evaristo Garcia, Dr. Miguel Caicedo, Dr. Emilio Villamezar.

* The following Medical Societies have been elected as auxiliaries of the Congress, viz: *Academia Nacional de Medicina*, *Academia de Medicina de Medellin*, *Sociedad de Medicina del Cauca*.

The following medical journal have been designated as official organs of the Congress, viz: *Revista Medica*, Bogota;

Revista de Hygiene, Bogota; *El Agricultor*, Bogota; *Boletin de Medicina del Cauca*, Cali; *Andes de la Academia de Medicina de Medellin*, Medellin.

The expressed wish of the profession of the United States of Columbia is for a date of meeting during the Columbian Exposition.—CHARLES A. L. REED, M. D., Secretary General, Cincinnati.

Medical Examining Board of Virginia,

Will meet in the city of Richmond, Va., Capitol Building, Tuesday, April 19th, 1892, at 8 o'clock P. M. This evening's session will be for the routine business of the Board, such as arranging questions for examination, etc.

The examination of applicants for license will be begun promptly at 9 o'clock on Wednesday, April 20th, and will continue two days. Every hour of time from 9 A. M. to 11 P. M. of each day is occupied in the examinations (except the hours from 3 to 4 P. M. for dinner, and 7 to 8 P. M. for supper).

Applicants for examination must be on hand from the beginning of the first examination, which will begin at 9 A. M., Wednesday. The first examination will be on Chemistry; the questions will be put on the blackboard at 9 A. M. and are taken down at 12 (mid-day), when the questions for the next subject for examination will be immediately put up and taken down at 3 P. M., etc. Questions once taken down are not put up again. Hence the great importance of each candidate being punctual at 9 A. M., Wednesday, April 20th, 1892.

Each candidate undergoing examination is expected to sign a paper containing a statement to the effect that he has neither received nor given any information on any of the subjects under examination during the time of the examination. Any party wishing to be examined, should come prepared with the examination fee of *five dollars* required by law, and report immediately to the Secretary of the Board (Dr. Paulus A. Irving, of Farmville, Va.,) who will be in the hall *half an hour* before the appointed time, to issue in due form the permits for examination.

Candidates for examination are not allowed to leave the hall after once entering it, until they have handed in their papers relating to the subject then on the blackboard.

Furthermore, they are not allowed during the progress of the examination to communicate with each other verbally or by notes or signs. Visitors will not be allowed in

the hall during the examinations except by official invitation of the Board, and under no circumstances will they be permitted to communicate with or interrupt the candidates during the time of the examination.

Candidates in turning in their papers to the respective chairman of Sections, must sign them, not with their names, but with *the numbers* assigned them by the Secretary, which numbers are to be known only to the parties and the Secretary, and by which numbers only are the papers as returned by the candidates examined and marked by the respective Section Examiners. Each candidate will have a desk or table assigned to him by number, and he is expected to occupy only that desk during the examination.

DR. HUGH M. TAYLOR, Richmond, Va., *President*.

DR. PAULUS A. IRVING, Farmville, Va., *Secretary*.

Electrical Executions.

The recent execution by electricity in New York of the murderer McElvaine seems to put beyond possibility the repeal of the law by which electricity was substituted for hanging in all capital cases.

There have now been seven or eight criminals in all put to death in this way, and the experimental stage has certainly passed. There was some degree of uncertainty felt by the public at large as to the painlessness and instantaneousness of the new method of death, so long as the law forbade any representatives of the press to be present, but now that this has been repealed, and the reporter has had a chance to write up the details, they are found to be just what were stated by the physicians in the earlier cases of electrical execution.

It is interesting to note, in connection with the McElvaine execution, that one of the grounds given for the appeal to the United States Supreme Court was that the sentence to solitary confinement until the time of execution was said to be a cruel and unusual punishment, and so contrary to law. The Supreme Court at once dismissed the appeal, and said that the Legislature and the New York Courts had already decided that solitary confinement pending execution was not a cruel and unusual punishment, and that there was no reason for reviewing this decision, but rather for following it.

It seems not unlikely that other States besides New York will soon be inclined to substitute electrical execution for hanging in capital cases.

Liability for Hospital Charges.

In a suit just begun in California, the claim is made that a husband is liable for the maintenance of his wife in an insane asylum, when the wife was taken many years ago to the institution and her identity was only recently discovered. It seems that the husband left his wife, who had previously been in an asylum, under circumstances which made it likely that he had intentionally abandoned her. This was not known, however, in 1876, when the woman was found unconscious in a lonely part of an Illinois town. She was then removed to St. Vincent's Hospital at St. Louis, where she has been for fifteen years. A few months ago, it was ascertained that her husband was a wealthy Californian, and a demand was made upon him for \$5,000. Of this amount he paid \$600, and said that the rest was outlawed. A suit has now been brought to test this question.

Damages for Mental Anguish.

The Courts of Texas, North Carolina, Indiana, and perhaps some other of the States, have proclaimed the principle of allowing damages for mental anguish in case of delayed telegrams, and in Texas a decision has just been rendered which broadens the application of the rule, and allows a wife damages for the negligent delay by a railroad in forwarding her husband's corpse. This is probably about as far as the principle can go, for it certainly would open a boundless field for liability if mental distress, in connection with the multitude of negligent acts by individuals and corporations, were to be dilated on in Court and made the principal basis for verdicts. Actual pecuniary loss in some States is the only valid ground for a judgment.

The International Medical Magazine

Is a monthly, begun February, 1892, devoted to Medical and Surgical Science, edited by Judson Daland, M. D., and published by the J. B. Lippincott Company of Philadelphia; large 8vo, 112 pages monthly; \$4 a year; single copy, 35 cents. The articles in this first number are all by eminent writers, and are marked by a high order of practical excellence. It proposes to fill an international demand for a liberal spirit in furnishing the busy practitioner with the best thought and work of the medical world. We most cordially commend it as a journal worthy of its claim.

Applications for Position in the Marine Hospital Service.

A board of officers will be convened in Washington May 2nd, 1892, for the purpose of examining applicants for admission to the grade of Assistant Surgeon in the U. S. Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: 1. Physical 2. Written. 3. Oral. 4. Clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and the natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order, as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After four years' service, Assistant Surgeons are entitled to examination for promotion to the grade of Passed Assistant Surgeon. Promotion to the grade of Surgeon is made according to seniority and after due examination, as vacancies occur in that grade. Assistant Surgeons receive sixteen hundred dollars, Passed Assistant Surgeons eighteen hundred dollars, and Surgeons twenty-five hundred dollars a year. When quarters are not provided, commutation at the rate of thirty, forty, or fifty dollars a month, according to grade, is allowed.

All grades above that of Assistant Surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service, up to forty per centum, after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Dr. WALTER WYMAN, *Supervising Surgeon-General, M. H. S., Washington, D. C.*

Female Doctors in Virginia Politics.

A correspondent, for whose opinion we entertain high regard, writes us as if we had urged (February editorial) the education of females as doctors, etc. How he got such a notion we do not know, for we avoided the discussion as to whether woman ought or ought not to be so educated and graduated. We simply stated facts which none deny—that some women can make good doctors, that they are being graduated by Southern colleges, that they are proving themselves capable, and, *without advocating* their settling in the South, we only pointed out that, in the very near future, they will be here. In view of this inevitable, we asked what course the profession of the South will pursue with reference to receiving reputable qualified female physicians who may locate in their communities? We added the opinion, in which we are confirmed by personal letters from some who occupy advanced positions in the Southern profession, that “as for the *vast majority* of the observant and conservative element of the profession,” properly qualified female doctors will receive professional recognition “in each instance as she comes.” To construe this statement of facts as *advising* the education of our sisters and daughters for professional duties is “jumping at a conclusion.” We would suggest the re-reading of that editorial to any who may be “surprised,” or “feel regret” at the position (?) taken.

Close of Annual Volume XVIII.

We close our eighteenth annual duties as founder and continuous editor of this journal with a degree of satisfaction that we wish all editors of worthy medical journals could feel as to their work. Begun in 1874 with no ambition other than to fill a want of the profession of this State, the *Virginia Medical Monthly*, through the weighty influence of the able contributors to its pages, has year by year developed its resources, until now it is the generally recognized representative journal of the Southern States. We trust subscribers are as well pleased with our efforts to furnish them with a reliable, authoritative and progressive journal as we are satisfied with their favors in adding new subscribers from all parts of the country. To those who are curious to get an insight into the cause of our gratification, we would direct their special attention to the “Index of Contributors, and Titles of their Articles” in this number.

Robins' New Drugstore,

Just built, 200 E. Marshall Street, Richmond, Va., has been fitted as a first-class Pharmacy by our friend, Mr. A. H. Robins, who has had more than thirty years' practical experience in compounding and dispensing pure medicines. With unusual facilities for securing accuracy and dispatch, and his constant personal attention, he is in position to furnish everything needed for the sick, of best quality, at shortest notice and lowest prices. He offers among the long list—steam and hand atomizers, steam and chemical inhalers, food warmers, night lamps, hypodermic, bulb, and fountain syringes, vaporizers, drainage tubes, sick feeders, electric batteries, urinals, bed pans, invalid cushions, pocket stoves, ice and hot water bags, etc. If you can't call on him, write to him. Prescription scales sensitive to 1.94 grain.

The Success Nasal Syringe

Is a success. Its simplicity of construction, the thoroughness of irrigation or spraying done by it, its freedom from danger of injury, its remarkable cheapness, etc., are things that specially commend it to the consideration of the general practitioner. Messrs. Purcell, Ladd & Co. are the sole agents for the Southern States. See their advertisement on page 20, after reading matter, for a fuller description.

Important Correction.

We thank a correspondent for calling attention to a serious typographical error on page 671 of our February number (which error *likewise occurs* in Prof. Pozzi's great *Treatise on Gynecology*, Vol. I, page 33, where also the error ought to be corrected). The prescription should undoubtedly call for *much less* morphine. Probably the author meant—

R.—Distilled water.....10.00
Morphine hydrochlorate... 0.10
Atropia sulphate..... 0.005

M.—S: Twenty five to 30 drops hypodermically.

Dr. F. L. Sim,

Editor of the *Memphis Medical Monthly*, we regret to learn, has lost one of his eyes because of detachment of the retina and choroiditis. We join with the *N. O. Medical and Surgical Journal* in an expression of our sincere sympathy.

Medical Department, University of the South,

At Sewanee, Tenn., will open session in April, and will aim at a standard like that of the University of Virginia. We note that Dr. J. S. Cain, of Nashville, Dr. J. A. Witherspoon, of Columbia, Tenn., Dr. H. W. Blanc, until recently of New Orleans, etc., are among its able Faculty. Dr. Blanc is Dean.

Vaccinate Children.

As there are cases of small-pox in some of the Northern cities, with which merchants, etc., are in daily communication, it would be well for family physicians generally to see that all of the children in their fields of practice are promptly vaccinated. The New England Vaccine Company supplies the best of vaccine virus points, etc. Mr. T. Roberts Baker, Richmond, Va., is the agent for Virginia, North Carolina, etc.

No Longer Lunatic Asylums, but Hospitals.

The sitting Virginia Legislature has done away with the title of Lunatic Asylum as applied to each of the four State institutions for the medical treatment of the insane patients in them, and substituted the word *Hospital* in its stead. This has long been a desirable change, for oftentimes there is *much in a name*.

The Florida State Medical Society

Will hold its Annual Session during April of this year in Key West. It is proposed that on adjournment of the Session the Society and its guests shall take a trip of a few days to Havana. The Committee of Arrangements are arranging with the Steamship Company for a very cheap *first-class* trip, which will no doubt be very enjoyable.

The Summer School of the University of Virginia

Is "a move in the right direction." The location itself is a summer resort, and the course of instruction, although very thorough, is light enough not to overtax the powers of the student during the summer months.

Some Book Notices

Prepared for this issue are crowded out until the April number.

The Occurrence of Typhus Fever in New York

Should suggest to practitioners generally the advisability of refreshing their information concerning this disease.

Obituary Record.

Dr. William Otway Owen

Died at his home in Lynchburg, Va., February 15, 1892, aged 71 years, from some secondary effects of a severe attack of influenza, which he had a month or so before. He was born October 20, 1820, in Lynchburg, where he resided all of his life. He was the son of Dr. Wm. Owen, who was the distinguished surgeon of that section of the State for over fifty years. His mother was a sister of the late Dr. Henry Latham, of Lynchburg. Dr. W. Otway Owen, after a well-grounded academic education, commenced life as a civil engineer. Afterwards he studied medicine, and graduated from the University of the City of New York in 1842. With his father, he soon established a more than State reputation as a most able surgeon; and had he contributed to medical journals the lessons of his experience and judgment, he would have gained a national fame. But unfortunately he wrote nothing for publication—not even contributing a paper to the Medical Society of Virginia, of which he was an active member from 1871 till his death. During the Confederate War, he was Surgeon-in-Chief of the Confederate Hospitals in Lynchburg, which position he filled with such signal ability as to cause him to be sought in consultation all over the Southern States by those surgeons who had been associated with him during the War. He was active in practice until influenza attacked him, some six weeks before his death, and he lived in the affections and confidence of the citizens and his brother doctors. He, however, always declined every professional honor offered him. He possessed an unusually clear and vigorous intellect, marked individuality, and keen perceptions. He had an elevated conception of the dignity and honor of the profession, and disdained all appearances of charlatanry. He was a gentleman of pleasing and courtly manners, and in social intercourse was a most delightful and entertaining

companion. In personal appearance, he was strikingly handsome. His sympathies were quick and responsive, and his disposition generous and open-handed. He was married in 1862; his widow survives, with six children. His professional mantle falls on his oldest son, Dr. R. O. Owen, of Lynchburg, Va., who is growing in professional renown. The physicians of Lynchburg, in called meeting, paid suitable tributes to the memory of the distinguished deceased.

Dr. David Washington Kile,

Who was born at Upper Tract, Pendleton county, W. Va., March 15th, 1864, and died February 1st, 1892, was a son of I. T. Kile, and a grandson of Rev. Geo. Schmucker, one of the ablest and most scholarly ministers of the Lutheran Church. Dr. Kile was a hard and conscientious student, and was thoroughly enamored of his profession. He spent 1885-86 at Bellevue Medical College, N. Y., and in 1887 graduated with high honors at the Louisville Medical College, at which time he was presented with a gold medal by the Faculty as an expression of their respect and esteem. Almost continuous ill health and intense suffering from rheumatism prevented him from actively practicing his profession except during brief periods.

A few years ago, he located at Mt. Olive, Shenandoah county, Va., but his health completely failing him a few months since, he removed to Saumsville, in the same county, where his death occurred as above stated.

During all his sufferings, his interest in his noble calling never left him, and he continued to be a close and progressive student, ever hoping for a restoration to health and a life of usefulness among the sick and suffering.

In the death of Dr. Kile, our profession has lost one who, under happier circumstances, would have proved an honor to it. C.

Neurosine in Epilepsy and Chorea.

Dr. A. F. Watkins, of Potosi, Mo., writes to the Dios Chemical Co., St. Louis, that he has found their neurosine a valuable nerve tonic, and the best remedy for epilepsy and chorea he has ever tried.

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